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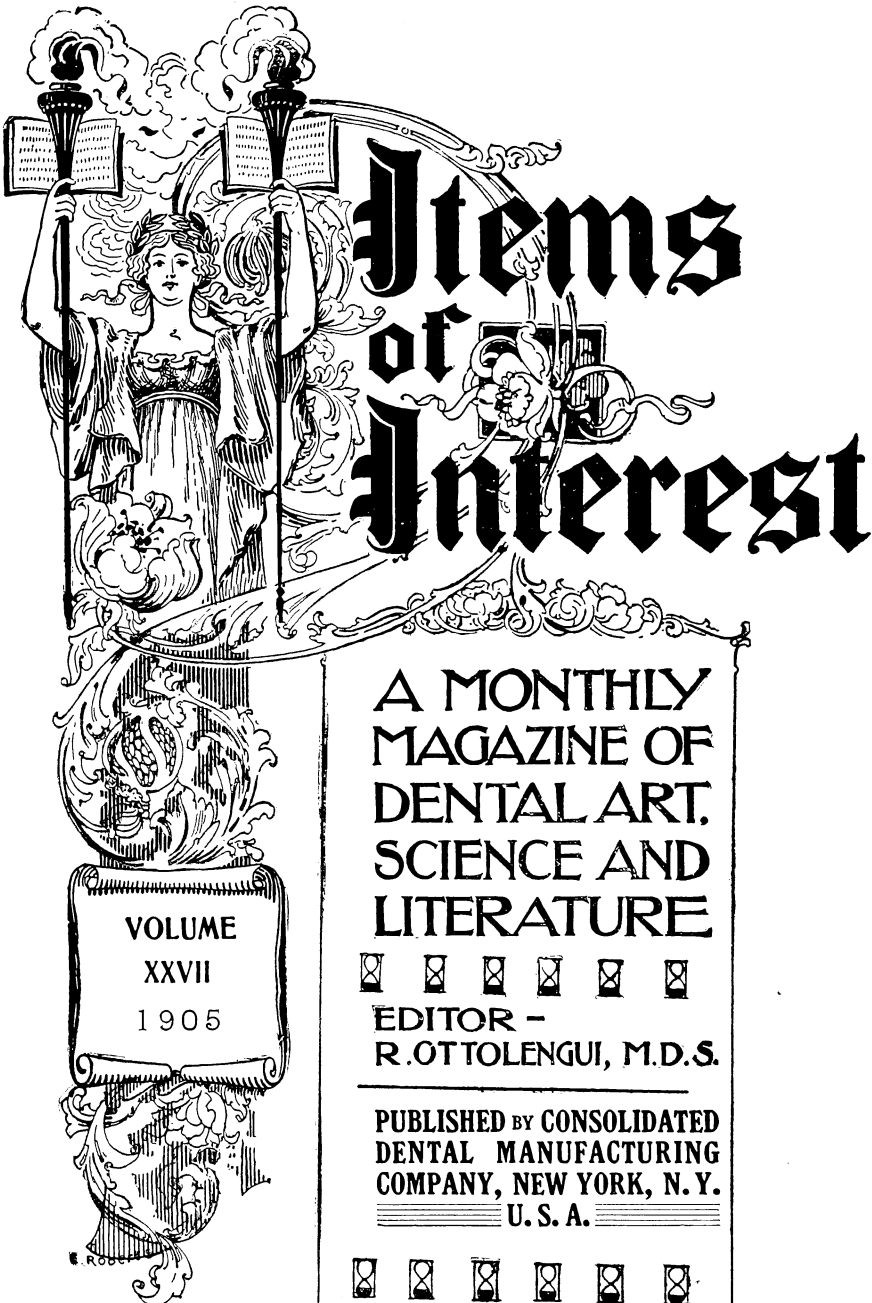
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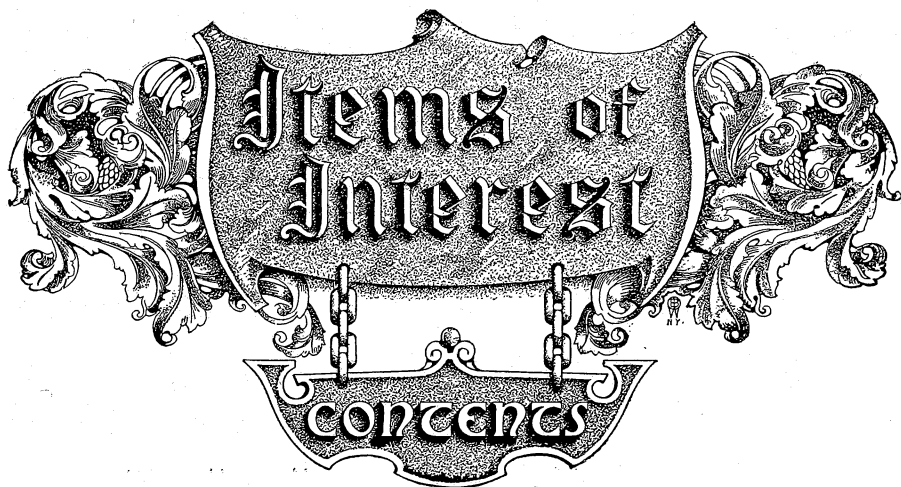
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Another Experience with the Colorado Board.

By J. B. WILLIAMS, D.D.S., Ashland, Wis.

In the December number of the *ITEMS OF INTEREST*, may be found a paper, under the head of "A New York Graduate's Experience with a Western State Board."

The State Board of Colorado is able to fight its own battles, and needs no assistance from me. The only reason for this paper, may be found in the following paragraph copied from Dr. Spooner's communication:

"But there is a grave side to this. Some other man may have to breathe Colorado air, and be so situated as to have to practice or starve. Let him beware of a State where they turn down a man with good credentials."

This is the advice of a New York man, who "passed the New York College with honorable mention." If his experience is worth publishing, why would not the experience of a country dentist, with the same board be of interest? I practised in the woods of Northern Wisconsin, I passed the State Board of Colorado, and perhaps my experience may encourage the very men that Dr. Spooner tries to discourage.

In July, 1903, I was in Colorado for the first time. I thought then, and have not changed my mind, that Denver is one of the most charming cities of this country. I called on the president of the State Board to find out what was necessary to get a license to practise there.

He said every one who practised dentistry in this State, must pass an examination before the board. That they had two meetings each year,

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June and December. Anyone who wished to commence to practise before taking the examination, could go to the secretary of the board, make an application for a license, and pay \$10 for the examination, and he would not be molested until after the next meeting of the board. At that time he must take the examination.

Author's Early Experience.

I told the doctor that it was nearly twenty years since I graduated from the Ohio Dental College, that when I was seventeen years old, I went to work in the office of the most disreputable man that ever pulled a tooth. After sweeping out the office and watching the vulcanizer for more than two years he said I was *qualified to practise* and as there was no dental law in Wisconsin at that time, I borrowed \$50, bought an old barber chair and a few things the boss wished to get rid of, and went at it. I pulled teeth and boiled rubber for a few years, got married and in debt for several hundred dollars, and thought I knew the business.

About this time I attended a meeting of the Wisconsin State Dental Society. Among others at that meeting was Marshal H. Webb. It was a revelation for me. I learned for the first time that I knew very little about dentistry. That was the most important lesson of my life. When I had practised for ten years I went to Cincinnati, attended one term of the Ohio Dental College and graduated. I don't think I can answer many questions in anatomy, chemistry, etc. "What will your board do with a man like that?"

The doctor asked me if I could put in a gold filling. I said, yes. "Can you prove to our board that you do the patients more good than harm?" I answered, "I think I can, I ought not to have a license if I can't do that," He said, "If you can do that I don't think you will have any trouble getting a license; we do not expect a man who has been in practise for a number of years to pass as good an examination as the young man just out of college, but he ought to do a better operation than most of the boys."

The Author Before the Board.

Nearly a year after this, or in June, 1904, I went to Denver to take the examination. After two days and two nights on the road (I am not a good traveler) I was not in a good condition for any work. I started with a class of thirty-two to take the examination. Because I am quite deaf, I was unable to hear what the members of the board said to the class, or the questions some of the class asked the examiners. I was also unable to hear what was said by members of the class between sessions. This was a great disadvantage for me. I was not able to answer all the questions, but thought they should not be hard for one who had recently attended lectures. Dr. Spooner said he spent the time from March to June reading up on what he thought he would be examined

on. I did not spend five minutes doing that. I answered what questions I could, did not try to "skirt around" the ones I did not know. I am sure I made a mess of the business.

We put in two days of this work, and the third day we were to operate. Here, like Dr. Spooner, I was unable to get a patient. After nearly all the other members of the class were at work, I got one with a cavity in the occluding surface of the lower first molar, right side; there was also a cavity in mesial approximal surface of the same tooth. The "blonde man" who was the nightmare for Dr. Spooner, examined the tooth and asked me which cavity I would fill. I said, "Both, for when the cavity is prepared there will be but one." He said, "All right, let me see the cavity before you start the filling." When the cavity was prepared, he and the other members of the board examined it. The "blonde man" asked me, "if I did not think there would be trouble with the pulp?" I said, no, not if I do as I would in my office. I would fill the lower third of that cavity with tin, and finish with gold. He said, "I would be pleased to have you do that, we want you to do the work just as you would at home." He and the other members of the board looked at the tooth a number of times, while I was filling it. When it was finished explorers and excavators were applied, but the filling did not come out. The only man who did not appear pleased with it was the colored gentleman who takes care of the college building. When he saw me packing up my instruments he asked me if I was through, I said, "Yes." Then he looked all around the chair, and said, "Well, where is the gold?" I said, "What I did not put into that tooth is here in my box." Then he showed me a bottle, such a one as Decimal Gold Rolls comes in, and he had it about half full of scraps, he had picked up on the floor around the chairs.

When I heard from the secretary of the board he said, "Your examination before the dental board was satisfactory. You will receive a license in a few days."

From my experience, I think I can say to any one that desires to locate in Colorado, if you know how to do practical work, and can prove you are a worthy member of the dental profession, you won't have much trouble with the State Board.

American Graduates in Germany.

Since ITEMS OF INTEREST exposed the bogus diploma mills in Illinois, results of vast importance have accrued, the latest phase of which, the persecution of reputable American dentists in Germany, calls for prompt sympathy of their colleagues in this country. We therefore give prominence to the subjoined petitions and letters, copies of which have

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been forwarded with the following letter of transmittal. If there is any action which can be taken to facilitate their cause it should be promptly done. It would not be inappropriate for the National Dental Association, the Faculties Association, the Examiners Association, and the State Society of Illinois, all to convene in extra sessions either of the main bodies or of their Executive Committees in order to bring some influence to bear upon the State Department.

(Letter of Transmittal.)

Dresden, December 1, 1904.

Dr. R. Ottolengui, 80 W. 40th street, New York.

Dear Doctor: We have with pleasure noted the course pursued by you in the publication of matters disclosing facts concerning the issue of bogus diplomas.

Permit us to express our thanks for the firm and impartial position taken. Your action will have a favorable effect upon the development of our interests here.

Inclosed you will please find copies of a petition which has been sent to the State Department, Washington; also, subject matter which may possibly prove of interest to you.

If by any means you could secure favorable action upon our petition in Washington, you would thereby earn the gratitude of all the American graduates of dental surgery practising in Germany. Ever at your service, we are, dear sir,

Respectfully,

C. J. MILKE, D.D.S. President of the Verein.

VON BUEST, D.D.S., M.D., Corresp. Secy. for U. S.
Pragerstr. 38 I.

Petition.

To His Excellency, the German Ambassador, Mr. Speck von Sternburg, Washington, D. C.

The undersigned "Association of Doctors of Dental Surgery Graduated in America" which, on account of the ignorance prevailing here concerning the general educational methods, and the regulations against the possessors of honors conferred by American Universities, becoming more strict, feel compelled to present enclosed petition to the State Department in Washington, and hand enclosed copy to your Excellency.

By a decision of the Imperial Court on Jan. 26, 1904, all titles conferred by American Universities excepting only Ann Arbor University, have been declared as not conferred by the State, and therefore not equal to those conferred by the German State Universities, and consequently null and void.



On account of this lack of understanding of the circumstances, colleges like Yale, Harvard, Pennsylvania, Columbia, Johns Hopkins, etc., because they are not in the German meaning State, but private institutions, are classed as second class.

On this account, not only numerous immigrated Americans, who, relying on the established legal basis, settled in Germany, but also about three hundred Germans, who with great sacrifices obtained a superior professional education, have been subjected to heavy professional and financial damage.

As an explanation and correct statement of the existing conditions seems to be urgently indicated we would request your Excellency, in the name of all those affected to kindly intercede in our behalf.

Yours respectfully,

Für den Verein in Amerika grad. Dokt. der Zähne.

JULIUS MILKE, D.D.S.

Petition to the Department of State.

The Honorable Secretary of State: The undersigned Verein, "*der Verein in Amerika graduierter Doktoren der Zahnheilkunde*" (Club of Doctors of Dental Surgery) incorporated under the laws of Germany beg to represent, that certain schools of dentistry of the State of Illinois, the statutes of which permit the incorporation of degree-granting institutions which have practically no State supervision or responsibility whatever, have sold to dentists practising in Germany hundreds of fraudulent dental diplomas.

As may naturally be inferred the government officials in Germany declare their inability to determine which school is worthy of recognition and which is not, and have as a result discriminated against almost all American dental degrees existing in Germany. Moreover they declare that all American dental colleges are *private*, not *State* universities, not recognized by nor controlled by, nor under jurisdiction of the State, therefore not founded upon a substantial basis insuring uniformity of requirements for matriculation and graduation; and hence inferior to and incomparable with the German institutions which are *State* universities and under the control of the State.

That this is a gross misconception of the dental educational system prevailing in the United States is proven by the awe-inspiring progress made by the dental colleges of the United States during the past twenty-five years, which indeed, from the beginning have taken the foremost rank in the scale of institutions of dental pedagogics of the world. Foremost in all pertaining to educational thought and teaching, the promoters of these colleges have made them a credit to the United States. Furthermore



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the Government of the United States in its recent enactment of the laws controlling the practice of dentistry in the Philippines determines that only graduates of colleges considered reputable by the National Association of Dental Faculties and the National Association of Dental Examiners are considered qualified to act as members of the State Board, thus establishing a precedent in the recognition of the two bodies governing the educational affairs of fifty-two of the fifty-six reputable dental colleges of the United States. We are moreover in possession of a letter written by the Hon. David B. Hill, with enclosures from the U. S. Commissioner of Education, W. T. Harris to Dr. Wormann, the former Consul-General at Munich; also a copy of the Advance Sheets edited by the U. S. Commissioner of Education, Chapter XXXVI, both containing a list of 56 dental colleges considered reputable by the Hon. Commissioner of Education, all of which demonstrate, what confidence is bestowed upon said institutions by the U. S. Government.

Your petitioner has gone to great pains and expense, and has collected voluminous material proving the unimpeachability of character of the reputable American institutions of learning and has through all legitimate means and numerous petitions endeavored to instruct the German authorities; the latter, however, continue their persecutions so that the position of the American graduate of dentistry in Germany is rapidly becoming untenable.

The German Government, your petitioner believes, will never take the initiative. We feel that if we appeal to the Hon. Secretary of State in vain, that our cause is lost and that the foul blot placed upon the reputable institutions of America by this disgraceful diploma traffic in Illinois will remain forever upon the American institutions.

In the interests of over 300 graduates of dental colleges of the United States, nearly 100 of whom are American citizens, whose very existence is being undermined by the endless persecutions of the German authorities and in the interests of the American Colleges of Dentistry, we pray:—

That a list of reputable dental colleges be recommended to His Excellency the German Ambassador, Speck von Sternburg in Washington;

Also, That such measures be adopted as will dispel all existing doubt as to the *legality*, the integrity and excellence of the above mentioned 56 dental colleges, and, furthermore, that such measures be adopted, demonstrating to the German authority that graduates of said colleges have legal degrees and are worthy of the confidence and recognition of any government.

Most respectfully submitted the day of December, 1904.

In the name of the Verein.

PRESIDENT JULIUS MILKE, D.D.S.
Dresden, Germany.



Petition to the National Association of Dental Faculties.

Gentlemen: The undersigned respectfully beg to present the copy of a petition sent to the Department of State, and to the German Ambassador, His Excellency, Herr Speck von Sternburg, in Washington, under the above date. The actions we have taken we trust, will be met with favor by every member of the N. A. D. F. The motives governing our attempts are not only instigated by the desire to establish the recognition of our degrees, but are prompted largely by the marks of disgrace that have been branded upon our alma mater.

To vindicate the reputable dental colleges of all connection with the Illinois scandal in the estimation of the German authorities will be a matter of the greatest difficulty, for the integrity of the American institutions has been shaken to its very foundation. Only international legislation, we feel, will achieve the desired result.

In taking cognizance of the enclosures it will be noted, that the German courts have ruled that only State Universities may be regarded as recognizable. Now there is no valid reason why the Germans should give preference to an American college simply because it is affiliated with a State University. Those acquainted with the educational system governing the dental colleges well know that the State and private school have the same curriculum and the same requirements, by virtue of their connection with the N. A. D. F. The position taken by the Germans, therefore, is untenable.

It seems the N. A. D. F. is peculiarly thrust into a position calculated to instil into the heart of its members the desire to clear the shadow hovering over its institutions. Moreover its schools have a great deal to win or a great deal to lose, for if the American diploma continues to be regarded as worthless, never will a German student take up American dentistry, if, indeed, the matriculants from Germany have not already failed to appear in their wonted frequency.

Would it be possible for the Executive Committee of N. A. D. F. to exert influences favoring the impending petition before the Commissioner of Education? Could not immediate action be taken? We fear that the postponement of this matter until 1905 will put us into serious predicament.

The status of the schools of the N. A. D. F., is the unit from which we and also to a certain extent the German Court, have been accustomed to examine the American College as to reputability.

In the hope that immediate action be made possible, we are, dear sirs, your faithful servants.

PRESIDENT JULIUS MILKE, D.D.S.
Dresden, Germany.



Letter to the National Association of Dental Faculties.

Recent actions taken by the German authorities have awakened feelings of the gravest apprehension on the part of the American dental graduates practising here. Decision after decision has been handed down by the several German Courts, each giving to the ever ready German dentist new weapons with which to persecute his American competitor. The German Union of Doctors of Dental Surgery, with the able assistance of General Consul Dr. Worman, formerly of Munich, now residing in Three Rivers, Canada, has been doing all in its power to repulse the repeated attacks directed against its members, and has moreover, petitioned the United States Government to lend its aid in its behalf.

The German-American Dental College of Chicago, and allied swindle institutions have so prejudiced the German government officials, that through the latest Supreme Court decisions, they have not only refused to recognize the American graduate as the equivalent of the German Zahnarzt, a class as is generally known, far behind the American in the matter of dental education, but has relegated all D.D.S. practising here to the non-graduates or *Zahnkünstler*, tooth-artists, a class notorious for their lack of theoretical preparation for the profession, and of whom no dental education is required by German law, thereby not only inflicting incalculable injury financially and socially, but lowering us professionally as well. We have moreover been subjected to the humiliating experience of having had our names sent to the "Bezirks-Arzt" or Chief of the Board of Health for entry into the list of non-graduates, under whose supervision we are forced to continue our practices.

Neither are we granted the lawful protection, due to every German graduate, against accidents happening to our patients during the practice of our profession, which alone may at any time lead to the ruin of any of our colleagues.

It seems now, that the use of medicines by the non-graduates or *Zahnkünstler* is to be prohibited, a measure which will compel the American D.D.S. to close his office. To protect the American graduate here a decisive step must be taken. The most important adverse decisions are based upon the supposition that the American dental colleges are *private institutions*, and unlike the German universities of like character, which are State institutions, not under the control of the Government, from which it follows, according to the German conception, that the American diploma does not possess the intrinsic value borne by one granted by "State universities". Among so-called private institutions in this sense may be mentioned Harvard University, Yale, Columbia, Johns Hopkins Universities and many others.

The fact that the American colleges may be regarded as private institutions is a serious obstacle in our path. As a result it is difficult to convince a foreign nation *that so many schools are uniform in their requirements and points of excellency.*

While it is an undeniable fact that the American dental course of instruction, the requirements for matriculation, the number and character of the obligatory branches taught is equal, and in almost all respects superior to the German, the American certificate of graduation is declared to be inferior. We can furthermore state that the output of the American college, the full-fledged American dentist, has so far demonstrated his superiority, that the prefix "American" has in Germany become to be regarded as synonymous with "excellent." We feel that a mere description of our course of instruction, the methods in vogue, etc., properly framed, would serve as indisputable evidence to prove that the legal fraternity of Germany, in decrying the attainments of the American D.D.S., are doing the American institutions a gross injustice. The National Association of Dental Faculties, as well as the board of directors of each college, can undoubtedly assist us in compiling such evidence. The last named especially, who doubtless receive some support from foreign matriculants, must consider it a duty to themselves to secure recognition of their diplomas, as well as the maintenance of the standing of their colleges, without which no student would possibly feel inclined to study American dentistry.

The following from Consul Worman in reply to a letter of inquiry from Dr. Brophy, is pertinent at this time.*

Letter from Consul Worman.

Three Rivers, Canada, Sept. 30, 1904.

Dr. Truman W. Brophy, Chicago, Ill.

Dear Sir: I beg to acknowledge receipt of your letter of September 21st, which reaches me here on my arrival, having followed me. The question you ask is:

First: Do graduates of American Dental Colleges which are affiliated with State Universities have advantages of recognition in Germany over schools which are not connected with State Universities?

This is a very particular question and needs elaboration in various ways.

First: The different States in Germany have accepted the list of reputable colleges, which I had caused to be published by the State Department, and I submit to you copy of the correspondence for your instruction.

The Courts of Germany have differed widely in their interpretation

*Copy furnished by Consul Worman.—ED.



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of the rights of graduates of reputable American Colleges to use their doctor title in Germany. Some have ruled it as permissible, and some have ruled against its use. Whenever I have been called upon to give expert testimony, the Courts have invariably accepted my interpretation and have permitted the use of "Doctor of Dental Surgery," in conformity with the edict of Bavaria.

It is claimed that in Prussia no permission has been given to any American practitioners to use their titles since 1897. I have, however, the assurance from the authorities there, that they stand ready to grant us the same concessions as in Bavaria, and I am sure that if I could give the assurance that the legislation in all States will be such as to prevent the establishment of fraudulent colleges this would be done. For this purpose I went to St. Louis, and I was disappointed that more was not accomplished, and that I was not given an opportunity to make my purposes and our needs clear.

In two very important cases in the highest court of Germany, rulings were given that make legal the use of title of "Doctor Chirurgiae Dentariae." These decisions I have translated into English and will furnish you copies of same if you so desire.

I have elaborated a statement for Dr. Kirk, from whom I have as yet not heard when he intends to publish it. If he does not intend to publish it, it should be published by the Foreign Relations Committee of the N. A. D. F., or returned to me.

I also furnish a statement to Dr. Ottolengui, editor of *ITEMS OF INTEREST*, which I also hand you. I have likewise prepared an answer to Erich Richter, who is responsible for the circulation of the reports, widely published, in which it was stated that the German Imperial Supreme Court had ruled that the American degree of "Doctor of Dental Surgery" could not be used in Germany. I contradicted this in the organ of the American graduates, called "*Archiv*," published at Berlin, and prepared a reply to the expert testimony of Richter, and believe that I proved him guilty of perjury as to his statements that the G. A. D. C. was a reputable college, and as such, recognized by the Illinois Board of Dental Examiners in 1890 to 1893, he, himself, having in the years 1894, 1895 and 1896 published statements asserting that, after most painstaking investigations he had convinced himself of the non-reputability of the G. A. D. C.

There can be no question about the right of graduates of American State Universities to use their title in Germany, but I do not believe that a mere affiliation with a State University would suffice for that purpose.

I am,

Yours truly,

(Signed.)

JAMES H. WORMAN.

Prison Dentistry.

By T. D. GREENE, Cortland, N. Y.

In the March number of *ITEMS OF INTEREST* I noticed an article written by Dr. Westervelt, of Albany, N. Y., relative to "Prison Dentistry." I think the Doctor is laboring under a mistaken impression as to the dental care given our criminal classes, and as I have for over three years had charge of the dental inspection at Clinton Prison with some eleven hundred inmates, I naturally feel in a position to know. I will describe the plan followed there, and about the same method is in vogue at Sing Sing and Auburn Prisons. Each convict in the shops is allowed several cents per day as earnings, and this sum, as it accrues, is permitted to be used for the dentist and oculist. At the expiration of the sentence, the balance is handed over to the released prisoner with a small additional sum, a ticket to his destination and a new suit of clothing, prison made.

I now visit this institution about once every two and a half months. My coming is announced by the various keepers, and those wishing to see the dentist are placed upon a list. I stay a little over a week, and in that time am at the service of all those who wish to see me. My fee is made to conform as much as possible to the relatively small earnings, and plastics predominate. The work is inspected by the prison physician, Dr. Ransom, in a thoroughly careful manner. The convict signs a voucher, this being paid at the office when presented.

Now as to the reason why a regular State dentist would not be desirable. First, the salary of one could hardly be placed lower than twelve hundred dollars yearly. This, together with traveling expenses, hotel bills, etc., would cost the state five hundred dollars more. Second, the dentist is now paid from a sum already provided for by the state. He is working upon his own responsibility; each fee is inspected before being paid, and I contend the state receives more than the other way. Third, the position would naturally have to be filled by civil service examination, and with all deference to the college training, a student fresh from his studies would probably win the appointment, being well up in theory, but lacking the mechanical training that only experience can give. Fourth, the state only providing the earnings, I hardly think the three prisons mentioned pay out more than one thousand dollars yearly, the dentists to these institutions making their profits by the work being paid for (i. e., gold fillings, etc.) by the convict from his own funds. It is obvious that no dentist could devote his whole time to one institution, but as an addition to his private practice it does very well, with not as much cost to the state.



In the United States Army we are now trying the experiment of surgeon dentists. I have worked for a great number of soldiers from one of our large army posts, and I find the soldiers much prefer going to the civilian dentist. It is human nature, when we are sure of the yearly income, to slacken the efforts.

I trust this little article will enlighten all interested.

A New and Original Method of Making Large Porcelain Restorations.

By DR. G. S. HERSHEY, Michigan City, Ind.

Prepare cavity as usual for porcelain, and in making matrix, be sure to anneal well if platinum foil is used. Paint walls of matrix with a solution of shellac, leaving floor free, if an approximal cavity. Let dry and fill with foundation body to about the contour desired, leaving room, of course, for the enamel bodies of the desired shades. Bake as usual without any of the heretofore precautions, such as the cutting of grooves, inserting pieces of very high fusing porcelain, etc. On removal from furnace you will find a crevice between matrix and porcelain. Now fill crevice with enamel bodies of the desired shades and finish as usual. The porcelain adheres only where the matrix is free from shellac. If the shellac is used correctly, it makes it impossible for the porcelain to pull the matrix. It can be used with success in large restorations, in the anterior teeth by painting the labial half and cervical third. This helps to preserve the contour by the shrinking of the porcelain away from the matrix instead of toward it. Then fill with enamel body the crevice and the labial portion, which has been cut away for shading. Finish as usual. The shellac burns out at a very low heat and has no effect on the porcelain whatever. To produce a clear solution, take a two ounce bottle half full of powdered shellac, fill with alcohol and shake well. Let it stand until thoroughly clear on top, then pour off into small bottle for immediate use. The large bottle may be filled with alcohol and put aside for future use, in same manner.



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Fixed Bridgework.*

By HART J. GOSLEE, D.D.S.,
Chicago, Ill.

(Open-face Crowns: Indications and Contra-Indications, Application, Preparation of Tooth, Construction, Variation of Method, Fusible Metal Models, Seamless Method, Application to Molars and Biscupids.)

Attachments to the Natural Crown.

Under the classification of attachments to the natural crown may be included all methods other than artificial crowns, or, all of those wherein an effort is made to obtain adequate anchorage and fixation and yet conserve as much as possible of the remaining natural crown of the tooth so employed.

Whilst such conservation of tooth structure is manifestly a desirable procedure, and one which should be observed wherever the requirements and possibilities seem favorable, yet it nevertheless often happens that the natural crowns thus utilized are saved only for the time being, to be lost subsequently as the result of the employment of methods which are contra-indicated, unreliable or inadequate.

Hence the employment of this class of attachments demands, on the whole, the exercise of rare good judgment, combined with the utmost of painstaking effort on the part of the operator, and will be successful only in proportion thereto.

*Open-face Crowns.

Under this classification the so-called "open-face" crown, which, as the name implies, consists of a telescope crown with the "face" or labial

*Copyright, 1904, by the author.

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surface so cut away as to expose as much as possible of this portion of the natural crown, is perhaps the most generally employed method of attachment.

The real and practical value of this particular style of attachment, however, is always a question of very great importance for the reason that one of two conditions incident to, or arising from, their employment does, or may, result. Either less destruction of the natural crown than for any other style of attachment is demanded; or, an infinitely greater degree of destruction may result from their injudicious application, or faulty adaptation.

Of the several influences which may have been responsible for retarding the practicability and success of modern "fixed" bridgework, the very greatest one can doubtless be attributed to the indiscriminate and unskillful application of such attachments, particularly when they may be classed as simple bands, and more good, sound teeth have been lost, and more failures recorded through this pernicious practice than from any other one source.



Fig. 243.

Hence, the indiscriminate employment of this class of attachments should be more or less generally condemned for the reason that their application may result in injury to, instead of conservation of, the supporting natural crown, and thus prove a menace to the possible success and permanency of the structure of which they form a part; and for the further reason that they are almost always conspicuously inartistic.

Two typical cases are illustrated in Fig. 243, where injudicious application and faulty adaptation of such attachments has ended in the loss of the supporting teeth. It is quite safe to prophecy such a result; or at least, the possible loss of the natural crown from hidden caries, if the adaptation be not accurate.

Notwithstanding these unfavorable features, however, there are occasional instances where the employment of this style of attachment may be indicated, and where their use may be productive of serviceable results in proportion as they may be carefully adapted and properly constructed.

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Indications and Contra-Indications.

The indications for the successful employment of such attachments would always confine their application exclusively to the six anterior teeth, and particularly to the *upper cuspids*, and to the *lower cuspids and incisors*, or, to those teeth where the normal shape and proportions of the natural crowns are more or less favorable.

The normal average inequality between the dimensions of the *crowns* and *necks* of the upper incisors, and of the bicuspid and molars, both upper and lower, however, usually demands so much mutilation of the natural crown in its preparation as to preclude their application to these teeth, or, at least to contraindicate their employment.

The fact that the application of this style of attachment admits of the telescoping principle, thereby answering the same purpose as an all gold crown without its objectionable features as applied to anterior teeth, and thus not demanding the sacrifice or exercising of the natural crown, often makes it possible to secure a greater degree of strength in the attachment to the root, by thus distributing the stress over the entire length of the tooth, than would be likely to accrue from sacrificing the natural crown and substituting a dowel crown. This is a particularly advantageous feature in extensive bridges in which anterior teeth are involved, and especially in the lower arch where the roots are small, and yet, since it must be acknowledged that the attachment between such a crown and the supporting tooth is usually of a more or less temporary nature, due to the possible penetration of saliva into the exposed joint, and the gradual dissolution of the cement, great care must be observed in securing the most accurate adaptation possible, especially when it is to be used in conjunction with another style of attachment, such as a crown, which would perhaps offer greater permanency when cemented to place.

Application.

If the application be confined to the class of teeth indicated; if the approximal surfaces of such teeth are properly trimmed so as to present parallel lines; if all other coronal proportions are reduced sufficiently to admit of the accurate adjustment of a crown and not a *simple band*; if the adjustment of the circular portion to the neck is accurate; if the entire lingual surface and incisal end of the tooth is so covered as to prevent the attachment from being forced root-wise; if the labial surface is so trimmed as to have as little gold show as possible; if all edges are then brought to "self-cleansing" points, and the whole then made strong enough to retain its shape, and admit of favorable occlusion with the opposing teeth, such attachments may be expected to offer reasonably permanent results.

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Preparation of Tooth.

In the preparation of the natural crown for the reception of an attachment of this kind the paralleling of the approximal walls should receive attention first. If an adjacent tooth be present, adequate space should be previously gained, and then the required trimming on each side may be easily accomplished with coarse disks, or very thin stones.

In this procedure it is necessary to remove only enough to admit of so reducing the coronal dimensions (Fig. 244 A) as to make possible the accurate adjustment of the crown to the cervix (Fig. 244 B), and care should be exercised to protect the adjacent natural crown, if one be present, from mutilation during the operation. The trimming of these surfaces should have a slight *lingual* tendency (Fig. 244 C), and should be continued until a measurement wire twisted taut at the cervix may be easily removed.

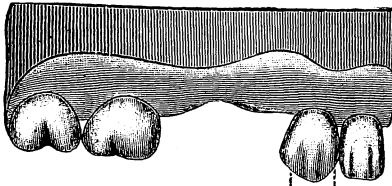


Fig. 244. a.

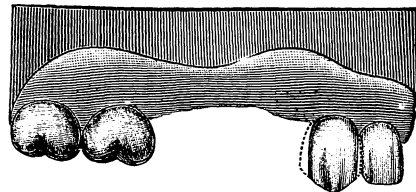


Fig. 244. b.

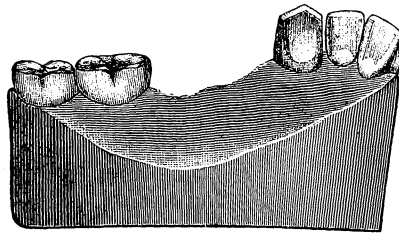


Fig. 244. c.

The *lingual* surface should then be ground away sufficiently to admit of the presence of the crown without interfering with the occlusion of the opposing teeth, and the *incisal end* should then be beveled lingually as a means of affording a definite edge to which this portion of the attachment may be finished, and a shoulder, which, when covered, will prevent its being forced root-wise beyond its proper relation. (Fig. 245.)

Construction.

In the construction of such attachments a thickness of gold should be used which may be easily and readily conformed to the tooth, but after being

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properly adapted, it must be subsequently reinforced in such manner as to insure adequate and uniform strength.

When the measurement has been taken with wire, as usual, a band of 29 or 30 gauge 22 K. gold should be cut of the same length as the measurement, and of a width greater, or, at least, equal, to the length of the natural crown from gum line to incisal end, and then made in circular form and soldered with 22 or 20 K. solder.

The cervical end should now be trimmed to follow the curvature of the gum, nicely rounded, and then fitted to this portion of the tooth, allowing it to pass a short but uniform distance beneath the free-margin. (Fig. 246 A.)

When the desired adaptation at this point has been secured, both the labial and lingual surfaces should be trimmed away as indicated in Fig.

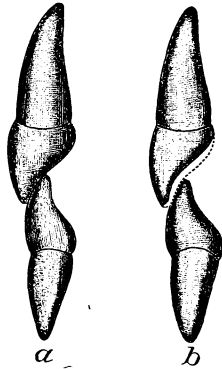


Fig. 245.

246 B. This reduces the exposed band upon the labial surface to the proper width, brings all labial edges to the desired point, to be self-cleansing, and allows the lingual band and *approximal surfaces* to be closely adapted to the tooth.

A piece of pure gold about 34 gauge should now be annealed and burished to the lingual surface of the teeth, with this portion of the crown in place, until a close contact with the tooth, and entire lingual edge of band, is obtained. (Fig. 246 C.) The two should then be removed, wired together, if necessary, and attached with just enough solder to effect union all around, during which the whole, and particularly the narrow labial band and pure gold back, may be uniformly reinforced upon the outer surface with the same karat solder. If the approximal surface of the attachment does not restore the contact point with the adjacent tooth, sufficient fullness to insure its restoration should be made at this time. This may be done with small pieces of plate gold, or with solder alone.

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The crown should then be again placed in position on the tooth and finished with disks until the adaptation is completed (Fig. 246 D), when the final impression with it and the other abutment pieces in place may be taken.

Variation of Method.

A more simple method is sometimes employed, in which *only* the *labial* portion of the band is cut away after proper adaptation to the cervix has been secured, and the remaining lingual portion is bent down and burnished to place directly upon the tooth. By cutting out a V-shaped piece from the immediate center, this may be done, and, of course, saves material and does not require the attachment of a separate backing, but the adaptation is usually less accurate.

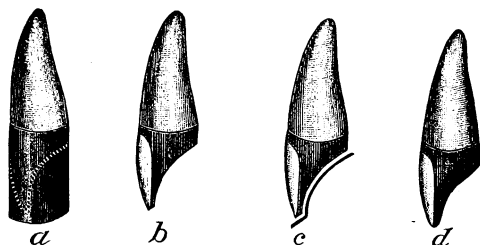


Fig. 246.

Fusible Metal Models.

The construction of such attachments upon fusible metal models of the tooth is also sometimes recommended as facilitating the procedure, but as the crown should pass slightly beneath the gum, such models are not accurate unless a *temporary* band of German silver or copper, so adjusted, and properly adapted, is previously fitted, and the model poured with this in place in the impression. Under such conditions a more or less accurate result may, of course, be obtained.

Seamless Method.

The seamless method, as referred to in Chapter VI may also be employed in the construction of such attachments, and this procedure affords an accurate fitting crown when the labial surface has been cut away—provided a temporary band has been previously adjusted—which is always necessary for the above-mentioned reasons.

Applications to Molars and Bicuspids.

While this style of attachment is sometimes employed on molars and bicuspids, such application is to be generally condemned for the reasons previously mentioned. When used upon these teeth they practically become simple bands, and other more permanent means of attachment are possible and should be employed.

(To be continued.)



Articulation.

By DR. G. M. WILLIAMS, Maysville, Ky.

In my mail today I find this notice pasted on the back of a dental laboratory price list: "Of late we have had so much trouble with bad models and incorrect bites sent us that we are constrained to pray you for your own sake, for our sake and for Heaven's sake to use more care in this direction." What is all this bugbear of correct articulation? I would say that if a dentist is unable to skilfully take a correct impression of the mouth, or make a proper model from the impression afterwards, it is simply nonsense to talk correct teeth making to him. With the impression and model right, we have only one thing to do for a perfect set of teeth, and that is articulation. We have our models before us on the bench, and wish now to place them in the articulator, occupying the same position as the maxillæ and mandible do in the mouth.

Take No. 12 brass wire and bend it in keeping with the outlines of the ridge of your lower model; start your bend in the center of the wire on the lingual side of ridge back to the ends of the ridge, pass over ridge at this point and continue your bend down the buccal side to center of model; treat the other side similarly. Turn your free ends outward and twist together and you have made a bite plate.

Take this bite plate and place a lump of wax on each side and press down on your lower model; remove, cool and trim till neat. Now place same amount of wax on the upper side of your trial bite, and place in the mouth and have your patient give you a bite of the upper jaw in the last placed wax. Remove and place your models in the impressions in your trial plate; secure plate and models together with a drop of wax at a few points and set properly in your articulator. You have now the models occupying the same position in the articulator as the jaws do in the mouth. Now make your trial plates while the models are in the articulator, and try in the mouth and see if they come flat together all the way around, to your great satisfaction. Trim or add wax to your models at this stage for proper fullness and proper closure of the jaws; but add no wax for opening or closing of the bite, unless your trial plates are on the models in the articulator. You have now your trial plates fitted to the proper fullness, length of the bite and ready to return to the models on the articulator. If you placed your lower model into the articulator in its proper position let it remain. Set your trial plates on this model and secure with a drop of wax. Remove your upper from the articulator and place to position in the upper trial plate. Now secure the upper bow of



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articulator to model and you have the same position in articulator that the jaws occupy in the mouth, with this proviso: if the mandibles are in an area of an equilateral triangle whose base is four inches, and you set your model in the articulator beyond or inside of this triangle, you may not expect the models in your articulator to occupying the same position that the jaws do to the mouth.

The wire bite plate can be made of an old lower impression cup by cutting off the rims. It is much neater than biscuit bite and more correct. Do not embarrass your patient about the proper closure of the mouth. If your bite plates are made neat, you get this closure in your manipulation for proper fullness and length of bite.





Is There a New School in Orthodontia?

By DR. BENNO E. LISCHER, St. Louis, Mo.

The December number of *ITEMS OF INTEREST* lies before me, and I have just read the editorial, "Is There a New School in Orthodontia?" Yes, I agree that there is, for the "world of science and learning, as well as the social world, has its alternating seasons and its capricious fashions." Even "mathematics and philosophy, theology and physics, philology and history, each has had its great time; each was once favored both by leaders of knowledge and by the crowd of imitating followers."

We need not go far back in the history of dentistry when orthodontia, as a special science, was unknown. Happily, through a division of labor and a specialization of problems, we find that several departments of dental science have become gradually separated from the whole, and have been made the special objects of research for particular groups of scholars. The reader of contemporaneous dental literature cannot fail to observe the intense interest and increasing consideration shown to the department of orthodontia. Certainly, to those who seriously watch its evolution, the signs of the time are full of encouragement.

But though we admit unusual progress in the treatment of irregularities, it does not yet appear that we have reached a stage of complete realization of our ideals. In its broadest interpretation, orthodontia is both an art and a science. As a science, it should be its aim to explain, classify and be able to account for every single fact within its domain. It is desirable, moreover, that these facts be correctly interpreted. This is the goal of

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every science that is conscious of the fundamental conceptions upon which it rests. It is unfortunate, indeed, that in various phases of its recent development, orthodontia has ignored this essential consistency. There is, therefore, some occasion for an attempt, inadequate though it be, to rid it of philosophic narrowness, evidences of which are surprisingly numerous.

In the editorial mentioned above, I read that the so-called "new school" in orthodontia claims that normal occlusion demands the presence of every tooth that the *Almighty planned for the human mouth, each in its proper place*. The editorial has the flavor of sincerity; in other words, the editor, too, seems to accept this imperious hypothesis. Again, in the address of the retiring president of the American Society of Orthodontists

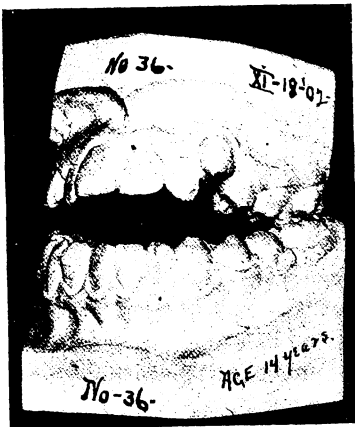


Fig. 1.



Fig. 2.

(delivered at their second annual meeting in Philadelphia, October, 1902), we are told that "*the Creator intended that they should be ideal.*" Now, I am very well acquainted with a picture of an ideal denture that has recently been so frequently reproduced and labeled *Secretum Apertum*. I believe this is the ideal these gentlemen have in mind (*des sogenannten normalen Bisses-Zuckerhandl*). Unavoidable as this belief may be to some, I must frankly ask what creator designed the denture, photos of which I enclose? (Figs. I and II.)*

The very fact that so many dental writers still seek this vague, teleo-

*No one claims that the Creator *designed* such deformity as here pictured, but the orthodontist of today claims that even such a denture may best be corrected by retaining all the teeth which the Creator (or Nature if you prefer), planned and placed in this mouth, and the rearrangement can be effected, and the bite closed *without extracting bicuspidis or grinding of the molars*.—EDITOR.

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logical background as a seat for their authority is, in the minds of some, sufficient evidence to prove the untenability of their position.

The fallacious theory of Bonwill need only be mentioned here as belonging to that same class of balderdash, for it has been hopelessly crushed by Tomes and Dolamore. (See Trans. of Odont. Soc'y of Gt. Brit.) But in spite of this scholarly contribution in opposition to Bonwill, our American journals still continue to be decorated with geometrical bric-a-brac and expensive illustrations in support of his triangular theory.

Ideal Occlusion. Now, is it not true that biological science, especially Darwinian researches, which are so intimately associated with the intellectual movement of the age, favor and strongly support such generalization as recently uttered by Prof. Cook, of the U. S. Government Service, viz., "A stationary heredity or continued repetition of an identical structural type exists nowhere in nature; variation is an inherent evolutionary property." Against this "first law of nature," man has, in all times, set up his petty limitations, for man loves to cling to seeming bounds. But in the light of the theory of evolution, it is difficult to understand how any one can regard the "ideal occlusion" of the teeth of man as anything divine, or to accept it as a finality. I believe that every orthodontist who embodies this "dogma" in his creed as an *infallible* working hypothesis, must admit that he accepts the exploded "principle of perfectibility" of Nageli. Would not this be contrary to all the assumptions of modern science? "It is, if I mistake not, in a weakened and modernized form, the offensive recrudescence of the old doctrine of the fixity of species." (Rimbaud). Certainly, such a doctrine is now no longer defensible.

Besides, since when has so detached a specialty as orthodontia the right to utter a final word upon the most difficult problem of modern philosophy, and to insist upon the acceptance of such a position as is implied in the "marks of design," argument? Where is more of the evidence? But do not understand me as denying the importance of occlusion. As a practitioner and teacher of orthodontia, I regard it as a *fundamental concept* of the science. But the fact that we are unwarranted, when speaking of an ideal denture, in calling it the "Design of the Almighty" or as expressing the "Planful Touch of an Intelligent Creator," need not militate against our using that ideal as a necessary goal for all our efforts. It has been said "that our universe is largely man-made, and must therefore be often remade to be solved," and so I, for one, am not horrified when I part with what I, too, regarded as a sort of preordained "basis of the science of orthodontia."

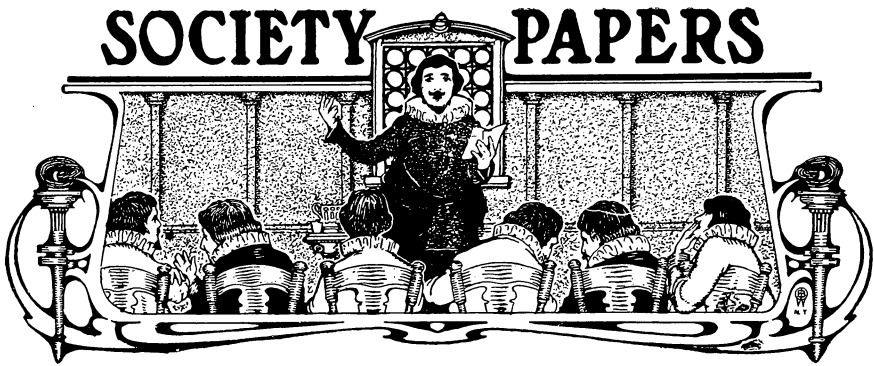
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As a concluding word, allow me to say that I
The Angle System. do not seek to discredit, in toto, the Angle system.

So far as Dr. Angle and the American Society of Orthodontists are concerned, I am very glad, upon all occasions, to express my respect for their nobility of purpose. The far-reaching effect of their contributions to orthodontia are too well known to need mentioning here. I wish merely to voice a growing conviction that the truth of "*ideal occlusion*" has been largely overestimated.

After all, let us sincerely hope that orthodontia has entered upon a new constructive phase, shall henceforth be frank to admit its many shortcomings, and decline to indulge in baseless theorizing. For the "laws of nature are stronger than the theories of men." I, for one, am confident that we will live through this period of "schools" and that all "systems," like the philosophic systems of the eighteenth century, are doomed to disaster. From an evolutionary point of view, it is safe to say that the Angle system marks but a stage of scientific orthodontia, and will always be regarded as the first attempt to establish a standard upon which a more rational treatment might be based. In its season it came as a healthy reaction against the superficial methods of earlier periods. But among the many, who for the present have unconditionally surrendered to its precepts, there will gradually be found an increasing number who will awaken to its limitations. I hope, in a future article, and in greater detail, to point out the fallacies of a system that pretends to have reached an approximate finality. For, let it not be forgotten, that any system whose aim is to dispose of a vast amount of material under so alluring a cry as "simplicity," but with an evident purpose of fixing the limits of future efforts, is but an illusion of the moment. "There is no principle which does not rest upon a condition, and there is no condition which may not change. No system can last for ever unless it be made of abstract principles incapable of demonstration."

We Americans need to become more thoroughly acquainted with the work of European writers before we can fully estimate the value of our own. That competent investigator, Grevers of Amsterdam, deserves a great deal of credit for crossing the Atlantic this summer to force some of us to a recognition of the inadequacy of the Angle classification and the looseness of its terminology. Our gratitude is also due him for his invaluable addition to a scientific nomenclature that originated with Carabelli, 1844, and to which Meyers (1868), Wedl (1870), Iszlai (1881), Sternfeld (1888) and others have so ably contributed.



Some Features in Our Operative Procedure.

By B. HOLLY SMITH, D.D.S., Baltimore, Md.

Discourse before the Boston and Tufts Dental Alumni Association, December, 1903.

As we approach the mouth it seems to me that we should consider from the standpoint of the surgeon, what we find in our field. The first thing done when a patient is sent to a hospital for operative procedure is to put him in a condition for surgery, to see that he is prepared for the ordeal. How many of us do that? Not many I fear. In order to bring home to you facts which you already know but which few of us put into practice, I wish to emphasize the importance of placing the mouth in a condition favorable for a dental operation. In the first place we find the teeth covered usually with various layers of mucous and salivary secretions, imbedded in the films of which we find pneumococci and streptococci and staphylococci and various other cocci; in fact, my friend here, the president of your society, told me that he spent a good deal of his time looking up these things, and I began to look suspiciously at him as though he might be cockeyed himself.

Now, these germs, ladies and gentlemen, are quite numerous, and their presence is significant; their genealogy and their progeny would make some of the New England family trees look like thirty cents, especially their progeny. Barnum's statement, that there was a sucker born every minute, is a very feeble expression when we regard the large number

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of these cocci that are born every second. They trace their origin as far back as Adam. When the serpent tempted Eve to eat the apple he set the great coccus, the father of all the others, as a sort of a trading stamp on the apple, and from that time until this, the human race has had to contend with the various forms of bacteria. They, however, have not always been successful in the war they have waged.

I say we have these germs in the mouth. Many of us proceed without regard to this condition, put on the rubber dam, tuck it up on the gum until the blood flows freely, and then proceed to operate. We have not cleaned our field of operation. We have simply disregarded the general condition. We expect to wait until we have thoroughly exposed or isolated the surface, upon which we are going to work, and then we will depend upon our efforts at sterilization to aid us. Is this right? Do we do this thoughtfully? I think not. I do not believe that all of us even think it is necessary for us to clean the teeth. In speaking, some time ago to a friend of mine, a man of rather pompous carriage, regarding prophylaxis from the new standpoint, or the standpoint at which we have arrived from the urgent efforts of our friend, Dr. Smith, he said: "I won't clean anyone's teeth. I am not a scullion." That, I fear, is the way some of us feel about cleaning the teeth. I saw on the New York, New Haven & Hartford Railroad as I came up, an old dilapidated looking car loaded down with perhaps the dirtiest load any car could ever carry—soft coal. The edges were frayed; it was bent down in the middle, but there seemed to be a pride about the car, which I compared to the pride in my friend, who said he did not clean teeth. The explanation was found in a sign painted on the end of the car, which read: "Not to be used in construction or gravel work." It is just as sensible for that car to carry its dirty load with pride as for the dental operator to work in a dirty field, to the neglect and detriment of his patient, without cleaning the field and making it sweet and nice and free from the germs of which we have spoken. Now, mouth infection has been considered a serious matter, and it ought to be. I don't think you, sir (turning to Dr. Thayer), have any right to do an abdominal section without first having the patient's mouth disinfected and cleaned. The presence of these various germs in large quantities, the fact that they are carried into the alimentary tract and that many of our extensive abdominal operations fail because of infection is ample ground for the contention. The staphylococci enter the little channels that lead from the cells and finally on until they reach the alimentary glands. Infection is not an uncommon thing. I do not think that we realize as much as we ought the probability of infection from the mouth. The mouth is usually a hotbed of micro-organic life. I think the

mouth is the dirtiest place you can possibly imagine, when it is filthy. No Augean stable compares to a filthy mouth, and what is cleaner and sweeter and prettier than the human mouth when it is clean? Tired and worn from a day's hunt, I sat down by a little mountain stream that flowed over beautiful white gravel. I thought as I saw the reflection of the side of the hills that nature had painted a picture as pretty as it could be; but honestly, the inspiration, the love and the admiration which grows in my heart in the presence of a sweet, clean and pretty mouth is greater than the inspiration which I thought I saw in the reflection of that water.

We do not think enough of this as dentists; that

Prophylaxis. these mouths are placed in our charge, that we are responsible for their condition. We do not realize what it is possible to make out of the human mouth. I had an opportunity not very long ago of viewing, with Dr. Taylor, Dr. Gaylord, Dr. Strang and other gentlemen from Pittsburg and various sections of the country, a spectacle in Dr. D. D. Smith's office. We met at his office in Philadelphia to examine the mouths of some of his patients, and I challenge any of you here to show in your practice forty such mouths. They were absolutely clean and sweet. They were just as pure and clean as they could be made. No foul breath, no sign of anything dirty on the teeth. The lustre was incomparable. It cannot be described. No jewel—nothing in the world ever looked as sweet and bright as the teeth with perfect lustre. Now, we saw forty mouths, and in every mouth the gums were snug up around the teeth. They were not red, but just a pale pink. They were beautiful. Even though some of the patients averred that they used tobacco, in every instance the breath was free from foetors. We looked them over carefully, and Dr. Gaylord told me that he had been there once before last winter, and had seen some thirty-nine mouths, and he said that there was but one patient shown this time that was shown before. I have been practising prophylaxis treatment as recommended by Dr. Smith. We have all done it more or less; that is to say, we are willing to acknowledge we have been doing it, even if not very thoroughly. I have been practising that treatment for some two or three years as a disciple of Doctor Smith, and I would like to see every man and woman agree to do the same thing—clean thoroughly, remove from the margins of the teeth and gums every particle of infectious matter, polish these teeth so well and carefully that the surfaces are covered with perfect lustre. It may be necessary to go to the extent of putting on a separator and drawing a tape with pumice stone between the teeth, or even using these instruments (indicating). I suppose most of you are familiar with the instruments Dr. Smith uses. I brought along with me a few of them. This (indicating) is file cut. You can take that down under the margin

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of the gum and clean off a tooth without doing any serious damage to the structure. I believe that it is a very good thing. Now, we have a number of smaller ones of the same kind, and of course, we have the little scalers. It seems a simple thing to talk about—the cleaning of the teeth—and I have no doubt that the gentlemen who are in the colleges here and have heard this talked about, think it is rather absurd that any point should be made or any time taken on the emphasis of the importance of cleaning the teeth; but I say this to you, if I had not seen for myself the most remarkable improvement over ordinary conditions attained by just this simple routine work, I would not be so emphatic.

Now, this little instrument (indicating) carries a piece of orange wood by which you can get at the surfaces, and this is another one—that is a Texas man's suggestion. You cannot clean the teeth properly and charge \$2 for it, as I used to do. You cannot do it that way. You must take the time to clean these teeth well, and have your patient come back in a month and renew the treatment. You are not going to accomplish anything very much unless it be done in the most painstaking and careful way. Dr. Bryan says when frequent return calls are demanded, patients might accuse you of wanting a fee. I take it, that it is not necessary to give up to our patients' whims in all things, and still it was somewhat with the view that we should have consideration for our patients that I want to make some contentions tonight. I think we do not give enough attention to them.

I want to speak of some five or six features of our operative procedure, and the next heading which I have is separation.

Separation of Teeth.

The separation of the teeth. I do not suppose there is one person here who uses rubber for separating teeth. I hope there is not, certainly. I do not suppose that anyone, who has worn rubber in his own teeth, would consent to use it on another person. Rubber should not be used. The method of separating teeth, which is most acceptable I think to the patient, is the use of cotton. This cotton must be tucked in between the teeth and tied with floss silk; cotton tape may also be used. I have been using a little preparation of tape, of which I thought I would bring some samples, because the ordinary cotton tape which we have bags, and it does not hold up after it gets wet, and is not so easy to manage. Here are different sizes which I use (indicating them). Now, these five sizes furnish me with what I want for separations. In short, I think you will find that it will be more satisfactory doubling it over on itself, than anything you can use.

In the separation of teeth I take advantage of the opportunity to prepare the teeth for filling; that is to say, to bring them to the condition

where sensitiveness will not exist. For this purpose I use oxy-chloride of zinc, especially if cavities are partially cleaned or the walls broken away. Where a little excavating has been done and a cavity left exposed it is more sensitive at the next sitting. When preparing a tooth for filling you will find that by the time you are ready to operate on that tooth the sensitiveness has disappeared almost entirely if you use this oxychloride of zinc.

**Protecting Cavities
from Moisture
Without the Dam.**

Next, I want to speak of the protection of our field of operation from moisture. I feel quite satisfied, that it would be unbecoming in me to advocate any retrograde step in the practice of dentistry. I know that you would not expect it of me, and still I come as a pleading advocate for the patient, and ask you not to use so frequently, so unnecessarily, the rubber dam. Do you know that most of my patients do not like the rubber dam? It is a positive fact. They are not fond of it. I have had patients who have said to me repeatedly, that they would rather never have another tooth filled, than have the rubber dam. I think we use it without any consideration for the patient's comfort. We use it where there is absolutely no necessity for its use. I would not say this, of course, to a class of students. I think there are "dogs and other animals" that are properly sacrificed in behalf of science; so, too, are they who have to put up with all of the rough treatment, which students and demonstrators put them through; but we are talking now of an entirely different class of people. We are talking of patients from the more polite circles, who are accustomed to refinement and who resent vulgarity and painful situations. Now, did you ever see a patient who really was happy with a rubber dam on? I never did, even though I have used it a great deal, though not so much now as formerly. I make a plea for the use of other means in keeping dry our field of operation, such as rolls of cotton and paper, so conveniently prepared by such firms as Johnson & Johnson and the White Company. By placing these rolls over the ducts, it is quite possible to do nearly any operation in dentistry, which requires less than one sheet of gold. If we do use the rubber dam, then the consideration which is the most important from a patient's standpoint, if not a necessity from a humanitarian's standpoint, is not to apply it more than once or twice a week for the same tooth, and not to push the ligature up over the neck of the tooth needlessly. I have seen cases of inflammation started because of the oft-repeated application of ligatures. I have seen untold injury done to the human mouth by the careless application of the rubber dam. If it is to be applied at all, it should be carefully selected. The majority of rubber dams are covered with soapstone of an offensive odor and usually

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of dark color. I think the Davidson dam of a light color can always be secured, and it is the best one for the purpose. There is no need of using the dark kind, sold by the men who go round from place to place and from town to town with their grips. I make a contention for a different protection of our field of operation than that of the rubber dam. It does seem that some things fasten themselves upon us; that some things come and go. We all of us know this. Dowsley and I were classmates at college, and we can recall a dozen things that have come and gone since. Still, there are some things that we consider essential. Paper after paper has been read, in which the author contended that the rubber dam always should be used, even in cleaning teeth. It is not necessary.

One of the most important things in our operative procedure is the selection of the material, with which we purpose to fill our cavities. I hope if you have not all read Dr. Perry's article on "Art in Dentistry," published in the *Cosmos* some time ago, and republished in the November *Digest*, that you will read it. It is an extremely interesting and inspiring article, and especially in reference to this very heading, under which I propose to say a few words—the selection of materials.

Selection of Materials.

Just as this rubber dam fastened itself upon our practice, so cohesive gold has fastened itself, it seems. I have been in Boston before, and though, perhaps, I have not seen the patients of any gentleman present, I have seen people on the streets—perhaps patients of the dental parlors—and I have seen some shocking sights in their mouths. The brass foundry effect has been very much in evidence. Now we do not practice dentistry in that way, and it is hardly worth while that we should spend any time in consideration of the almost brutalizing influence of the work of those beastly men, who do put conspicuous gold filling and gold crowns in the incisal region. Those men are not fit for us to associate with. We would not have anything to do with them, and their practice is, of course, beneath us. But now, ladies and gentlemen, do *we* show a nice discrimination in the selection of our materials for filling teeth? In the first place, are we prepared to do as we should do with any material which we consider best? In the incisal region, from bicuspid to bicuspid, there is certainly in the large majority of cases little need for any gold except non-cohesive gold. The restoration of these broken-down spaces with cohesive gold is an unsightly thing, and ought not to be done. It has been done. It has saved teeth, but the day for that sort of treatment has passed. If those cavities cannot be filled so as not to appear to be filled from the labial surface, then these teeth should be restored with porcelain inlays. How often have you seen a beautiful face marred in its expression by a smile, which ought surely to be the most graceful expression of the human

countenance, but which causes a revulsion of feeling by exposing great monuments of some dentist's skill. It ought not to be done. If there are approximal cavities, which cannot be filled with non-cohesive gold so that the labial surface is preserved and the filling boxes back to a V lingually, then you should better resort to porcelain inlays. The use of porcelain must take the place of gold in this section of our mouths, because patients will become gradually more appreciative of its natural appearance, and demand it.

I intended this evening to spend some time in talking about the manipulation of materials, but I should very much rather that that would be handled by you and perhaps by me a little later.

In the use of our foils for filling materials there are certain helps, which are absolutely essential, and we are very wrong if we fail to take advantage of them.

I have with me a model showing the Crenshaw matrix, with which, perhaps, some of you are already familiar. It certainly does make the filling of teeth a pleasure. How often have I broken my back building up a molar tooth with cohesive gold, spending perhaps an hour and a half on it, when it can all be done in thirty minutes, and as well done, and as perfectly done, by the use of non-cohesive gold. The gold must be carried down and two-thirds of the cavity filled with it. Then use cohesive gold, welding it there by manipulation; that is sure to resist any amount of force. Dr. Black said that non-cohesive gold did not resist the force of mastication. Either the filling he had in mind was not prepared or condensed as I know non-cohesive gold can be condensed, or the conditions under which the test was made were entirely unlike the conditions which we find in the mouth. I know we have patients where non-cohesive gold was put in several years ago on the occlusal surface of the molar teeth, and those fillings are there today. Of course, they have worn some, but not much more than the tooth itself. I have seen non-cohesive fillings rolled into a perfectly homogeneous plate. We must not overlook this old material altogether. Let us not go so fast as to throw aside that which is good.

There are four or five different matrices made—the Perry matrix is a very good one, indeed. This shows the Ivory retainer. There is a little piece cut out of it in this case, as you can see; just that little piece of metal is cut out with scissors and placed in position. This makes the work so much easier. Really it seems to me that half the pains and difficulties of operative dentistry have passed away, and it becomes almost a pleasure to do the ordinary operations.



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Use of Screws. Leaving the subject of matrices, I want to say something to you about the use of the screw in dentistry; especially to advocate the use of screws in all circumstances where extensive cohesive gold operations are to be done, because in my experience the fillings, in which screws have been used, have shown greater permanency than those where the dependence has been upon under cuts and retaining points. I have recently had an opportunity to restore the upper and lower portions of the mouth of a patient with porcelain, and I had grave doubts as to its permanency; but the work has been done now for something like five or six months, and in every case we used the screw baked in the porcelain. It is astonishing what we have been able to do on those teeth. This little screw is baked in the porcelain, and gives very great security to the work.

Now, it may seem absurd, especially to you college men, who do so much of this work, to make a point of giving emphasis to the use of these materials, but, nevertheless, I call your attention to this. I happen to have a couple of models of the mouths of young women patients. For instance the woman who wore this tooth in her mouth is nineteen years of age. She was in the hands of one of our best dentists. He has really done beautiful work for her. The third of this tooth was fractured. He had cohesive gold in the whole surface and that spoiled her appearance. The tooth was so sensitive, that she could not go on the street in cold weather. She had to carry her lip over her tooth. While he was considering whether he should cut it off, and put a crown on it, or not, through some means she came to me. I tried to get her to go back to him, because he really had done her good service, but she would not. He did not do porcelain work. With the use of our screws we put on a porcelain inlay. This model shows the result. We could not have retained a porcelain inlay there without the use of the screws. Of course, you can use pins, but I am now considering the use of the screw. Here is another patient. This tooth was very thin and very sensitive to the use of acids. By the use of screws we were able to repair that so you would not know there was a deformity at all.

These patients come from some of the very best people. People who are not accustomed to go to quacks or Cheap Johns. I argue that if that is true in Baltimore and Philadelphia, if it is true that men there are not awake to the necessity of the day and hour, possibly some of you may not be; you all know about porcelain, but how many of you use it when it ought to be used? Do we all do it? If you do not, you must; even if you stay at home from the next national meeting, you must get a porcelain furnace. You must do porcelain work yourselves; and the sooner you get at it, the better it will be for you and the better for your patients.

I want to pass around these little instruments for approximal work. (Instruments passed around table for inspection.) Those (indicating) are some of Dr. White's. Some one said to me a short time ago: "I am very fond of roses, and I have a garden filled with flowers, which I have received from different friends of mine, and I call it a friends' garden. It is the same way with me as to these instruments. That is a nice feature about instruments. I have a little corner in my desk where I keep instruments given me by my friends or designed by some of my friends. I never will forget an instrument that old Dr. Lord gave me. I have made a good deal of use of it. I am going to pass that around. These are the instruments Dr. Gordon White suggested. Here is a little instrument Dr. Mitchell gave me. It is very neat and pretty, and I thought I would bring that along. This (indicating) is also one of Dr. Lord's non-cohesive gold pluggers.

The next thing I want to speak to you about is the removal of the dental pulp. It is not considered by many of our western friends a bad thing to remove the dental pulp. Some people have said that no crown should be put on a tooth without removing the dental pulp. I read a letter recently written by Dr. Greenwood, in which he said he had made a wonderful discovery. It was, that by placing arsenic in a tooth you could fill it without a bit of pain. Ever since that day arsenic has been used with varying results for the destruction of the pulp of the tooth. I am totally at a loss to know why anyone should think it possible to limit the effect of arsenic to the pulp of a tooth. If arsenic produces a destructive inflammation in the pulp of the tooth, why should it not produce destructive inflammation in the apical area? I can prove to you that the tooth in which arsenic has been used in the destruction of the pulp will sooner or later, through the presence of necrotic tissues at the apex, be a source of trouble to the patient. I beg of you not to use arsenic any more. I urge you instead, to remove the pulp surgically, deadening sensation by means of cocaine. The technique of the operation may not be familiar to us all; we have not done it ourselves as much as we would like to, so I venture to give it. Use the soft rubber—unvulcanized rubber. Place in the cavity the crystals of cocaine moistened with adrenalin chloride. Put a small pellet of the rubber over this. Then stretch a strip of rubber over the surface of the tooth. Hold it with an Ivory clamp, on the jaws of which you have a vulcanized rubber tube, to prevent cutting the soft rubber. Then take your flat instrument and press back until you have sealed the margin. Press the soft rubber into your cavity, so that it is large enough to take the circumference of the cavity, and you can force your cocaine into the exposed portion. Now, how about exposing that portion? Is it painful? You can do something to prevent



it from being painful. You can use cataphoresis or desiccate with hot air. A great many people got tired of cataphoresis. I use cataphoresis as much as ever for exposing the pulp, though I sometimes have gone as far as to use gas to remove a pulp. If you have a projecting pulp, you sometimes have difficulty in getting the same removed. This can be overcome by the use of adrenalin chloride. But you must have it fresh in order that it may have the effect. With adrenalin chloride you not only reduce the secretion which we sometimes find at the apex after the extraction of the pulp, but if this is done in a surgical way, the pulp canal can be filled at once, with reasonable hope that no trouble will arise. With the application of arsenic, I have no patience whatever, and I trust we will discountenance its use as much as possible.

Now, I hope, gentlemen, that the discussion which will grow out of this blunt and plain setting forth of the truth may be of help to me, if not to you.

Six Years' Work in Oral Prophylaxis.

By D. D. SMITH, D.D.S., M.D., Philadelphia, Pa.

Read before the New Jersey State Dental Society, July, 1904.

The term oral prophylaxis, so recently injected into the vocabulary of dentistry, is endowed with a meaning which as yet seems not well understood.

Prophylaxis is quite commonly confounded with prophylactic, and is used by speakers and writers interchangeably with it, when, in fact, the two words have quite separate and distinctive significations. These terms are also used, apparently without discrimination, as synonyms for asepsis, oral hygiene, oral massage, and whatever is supposed to ward off disease of the teeth.

One dental writer says, "Prophylaxis has invaded the domain of nearly every disease, and its science and practice is daily increasing and its field of usefulness becoming better known."

Prophylactic measures may be employed to ward off some diseases when preventive remedies, from experience, commend themselves, or when experimentation in this direction seems warranted, but to affirm that "*Prophylaxis* has invaded the domain of nearly every disease" seems a confusion of terms.

It is to be hoped that the science of prophylaxis is becoming better known, but it cannot at present be said that prophylactic remedies or the prophylaxis treatment is "well understood" in dentistry, or that either is applied or practiced as a science.

In defining the terms prophylactic and prophylaxis we would emphasize the fact that prophylactic is a word used both as an adjective and as a noun, and that it relates to therapeutic *remedies*, which may be administered as preventative of disease. Prophylaxis relates to remedial or preventative *treatment*. The dictionaries generally pointed to the signification as here given when the first paper on this subject was prepared and read in 1898, under the caption, "Prophylaxis in Dentistry." Only one has been found to give prophylaxis any other meaning; this, as follows: "Prophylaxis, preservative treatment for disease; conservation"; from which one would naturally infer that prophylaxis preserves and conserves disease, instead of preventing it.

Webster's Dictionary, 1901 edition, defines prophylactic as follows: "Prophylactic, a *medicine* which preserves or defends against disease; a preventative"; and "prophylaxis, the *art* of preserving from or of preventing disease. The observance of the rules necessary for the preservation of health; preservative or *preventative treatment*."

Worcester gives: "Prophylactic, an adjective, preventing disease; preservative." Prophylaxis not defined.

The Century: "Prophylactic, *n.*, pertaining to guarding; precautionary; keep guard before; anything, as a *medicine*, which defends against disease; a preventative of disease;" and "prophylactic, *a.*, preventative; defending from disease, as prophylactic doses of quinine." (That is, treatment by therapy; therapeutic treatment.) "Prophylaxis, the guarding against the attack of some disease"; example: "The germs do not appear to be very tenacious of life, so that an efficient prophylaxis may be readily exercised."—*Science*.

Standard Dictionary: "Prophylactic, any medicine or measure efficacious in protecting from disease." "Prophylaxis, preservative or preventative *treatment* for disease; especially a particular form of disease in an individual."

Briefly then, prophylaxis is an art or a surgical treatment, involving manipulative effort, as distinguished from the administration of a systemic medicament or a therapeutic remedy. Hence, oral prophylaxis implies surgical instrumentation or treatment of the mouth and teeth in contradistinction to a germicide, a wash, or any form of medication for the prevention of disease in the oral cavity.

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Although the title of this paper is "Six Years' Work in Oral Prophylaxis," the time really covered in developing the treatment, by the author, embraces a period of ten years. Experiments were carried forward on members of my own family and among friends for four years prior to the reading of the paper on "Prophylaxis in Dentistry" referred to above, that theories might be verified before giving any publicity to the treatment. The results were so satisfactory that in the beginning of the fifth year it was determined to force recognition of it in general practice, little dreaming what astounding revelations were to follow.

In reviewing the subject at this time it will be my endeavor, as in former papers, to present some of the remarkable phenomena which appear as unvarying results, from a consistent and intelligent prophylaxis treatment of the mouth and teeth. While these results are surprising, almost startling, to one who has never witnessed them, they are but the logical and inevitable outcome of this system of caring for the mouth and teeth.

Prophylaxis as Applied in the Mouth.

To understand what the prophylaxis treatment in its application to the mouth and teeth is, we must understand the long train of unstudied and disregarded pathologic conditions which have their origin in the undisturbed infection on and about the teeth in the human mouth.

Calcific deposits are constantly occurring and recurring, and not less the more immediately hurtful acidulated bacterial accumulations; and more dangerous still the inspissated mucus which cements mouth fluids, mucoid excretions, decomposing food particles, and other septic and odoriferous matter upon the teeth; this debris is all maintained in the high normal heat of the mouth—98.6 deg. F.—and furnishes ideal conditions for the proliferation of germs, the induction of decay, and the fostering of disease in the human system. The pathologic states of the mouth and teeth in the order of their seriousness and frequency, may be defined as follows: pericemento-alveolar inflammations, dental caries, and impeded alveolar development.

Resulting from the first and most important—pericemento-alveolar inflammations—we find gum inflammations, alveolar absorption, pyorrhea, stomatitis, and pericemental abscess; the latter a serious condition, resulting in the inevitable loss of the tooth. Caries, with its attendant decalcification of dentine, followed by pulp exposure, alveolar abscess, and final destruction of the *crown* of the tooth, although it has engrossed the thought of dentistry in the past and is the embodiment of its efforts in the present, is far less serious in its results. Impeded alveolar development, a common result of mouth infection of childhood, is a cause of many alveolar deformities and many crowded and irregular conditions of the

teeth; conditions which detract from the charm of facial expression, greatly increase infection, incite decay and multiply loss of the teeth.

Whether conscious of it or not, every human being with natural teeth is a sufferer from mouth infection; some to a greater extent than others—the civilized more than the savage.

The oral prophylaxis treatment, as instituted and recommended by the author, has for its one object and aim the freeing of the oral cavity of conditions of tooth decay which has become practically universal, and the eradication of infection from the same, to conserve human health and prolong human life. In all stations and conditions the treatment has demonstrated its efficiency and its reasonable practicability. The benefits accruing to the mouth and teeth and thence to the general health, are startling in the scope of their marvelous efficiency.

**Tooth Decay
and
Tooth Preservation.**

In previous writings I have persistently maintained that tooth decay always begins on some surface of the tooth which is exposed to the fluids of the mouth. It never originates in the substance of the tooth unexposed, either crown or root. If the decay is in the crown, it begins in the enamel; if devoid of enamel, it may attack the surface of the dentine at any point. Once in the dentine the decay proceeds along the lines of the tubules in the direction of the pulp. The process of tooth-solution, which we call decay, is largely chemical, and is hindered or opposed by two conditions only: (a) the composition or consolidation of enamel and dentine (b) the expression of vital energy interposed by a living pulp—a force often scarcely appreciable. No matter what the physical state of the crown of the tooth, whether hard or soft, good or bad, alive or dead, the agents and agencies which cause decay are in the environment or surroundings of the teeth. Evidence from practical experience in support of this is abundant and unvarying. A simple and incontestable proof is found in the state of an extracted tooth. Let a pulpless, decaying tooth be removed from a mouth where the environments are such that resolution is rapidly taking place, and let it be placed in water, alcohol or glycerin, or simply exposed in the air, and all decay in that tooth is immediately arrested; any further disintegration will come only with the lapse of years.

To institute simulated or artificial decay in a tooth while it is out of its natural environment, as has been frequently done, is wholly unavailing as a matter of scientific investigation. All such processes are but artificial decomposition, and are so unlike tooth-decay in the mouth that true scientific research is not advanced by them. Teeth are the subject of true decay only when they are in the normal menstruum and temperature of the mouth.

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The all-important matter for dentistry to consider and determine is, whether oral prophylaxis, understood and properly instituted, will arrest, prevent, or retard decay of the teeth *in the mouth*. To this end there is needed not *theorizing* but clear clinical observation and close study of mouth conditions.

Ten years' experimentation has abundantly demonstrated that while the treatment will not arrest decay which is already in progress, whether as new cavities or under old or imperfect fillings, it will prevent its appearance on surfaces where the prophylaxis treatment has been regularly instituted. It will also greatly retard the progress of decay in open cavities and under old fillings.

An editorial in a recent number of *American Medicine* reads in part as follows: "There are ten millions of them! Everybody knows about them, the disease they spread, their horrors, their worse than loathsomeness! Everyone endures, submits in silence, feels himself powerless to remedy. Boards of Health cannot, or think they cannot, attack the evil; or they are too busy with things they think are more important. And so the filthy country and village water-closet persists from generation to generation. The intellectual philanthropist is yet to come who shall undertake one of the greatest reforms of the world!"

The greatest sanitary reform of the world is not the abolition of the village closet, but it lies in the herculean task of revolutionizing the unsanitary and infectious condition of the human mouth. Contagion and disease from the latter are a thousand-fold more subtle and dangerous than from the former, for infection in the human mouth is found not in country and village alone, but in town and city—in all places where humanity dwells.

If this be true, and who shall dispute it? oral prophylaxis treatment presents itself as a subject of momentous import both for the profession and the public. It is not a matter to be tossed hastily aside because it does not coincide with our prejudices or preconceived opinions; neither is it a matter to be adjudged wholly from the standpoint of self-interest. Theoretical difficulties have been presented and unjustifiable self-interests have been urged against it, until we have sometimes asked with unutterable groanings, "Is dentistry, with such views, worthy to be called a profession?"

One writer declares, "The great limitation to the universal success of Dr. Smith's method lies in the non-receptiveness of the mass of people to methods involving as much attention to detail as must be required of those patients following his system."

This unjustifiable deduction in the *Cosmos*, from the pen of a professor in dentistry, exhibits not only the prejudice of inexperience, but shows a lamentable, if not inexcusable, ignorance of the whole subject of

oral prophylaxis; it is an example of the futility of theory in dentistry *vs.* practical experience.

In reply to the seeming objection respecting "the non-receptiveness of the mass of the people," it may be said, the statement is assertion only; it has no basis in fact.

To "the mass of the people" dentistry of the present extends no benefits, it presents no hope, it affords no relief, save in the one direction—that of ridding the mouth of aching teeth through extraction. "The mass of the people" are not instructed respecting the teeth; they are wholly unacquainted with the necessities, requirements or value of these organs. How, then, should they be expected to follow out any theory or give attention to the details of any "system," for their betterment or preservation?

This, however, is true—whenever requisite presentation respecting the infectious states of the teeth in ordinary conditions of the human mouth is made to people of intelligence, with whom dentistry has largely to do, and the relations of these conditions to decay of the teeth has been correlated and explained, the liveliest interest has always been awakened, and patients have been stirred to willing co-operation in all reasonable efforts for the betterment and immunizing of the teeth by the system of prophylaxis treatment which I have advocated for the six years just past.

When instructed, patients have been quick to see and appreciate the imminent danger of systemic infection due to septic states of untreated teeth. A set of septic teeth, ordinarily presenting a surface of twenty to thirty square inches in the oral cavity, a cavity which has been aptly designated the vestibule of life, is a perpetual menace to human health.

No adequate consideration has ever been given to the sources of infection inherent in the human mouth, consequent upon the presence of natural teeth. The adverse *local* consequences—decay, alveolar necrosis, pyorrhea, gum recession and final loss of the teeth—are as nothing in comparison with the evils to be revealed in the systemic disturbances and diseases which result from the continuous state of infection found in association with the teeth in the human mouth. These conditions, studied by dentistry and intelligently set forth to "the mass of people" would find "a receptiveness" which would not only astonish the opponents of this "system" of preventive treatment, but would render incalculable benefits to general health, longevity and the happiness of all civilized humanity.

Let us here consider the nature and character of the prophylaxis treatment, and what it does for the mouth and teeth.

What the Prophylaxis Treatment is.

In general the treatment consists of enforced, radical and frequent change of environment for all teeth

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and all mouth conditions, and the maintenance of perfect sanitation for the oral cavity. More specifically it is the careful and complete removal of all concretions, calcic deposits, semi-solids, bacterial plaques and inspissated secretions and excretions which gather on the surfaces of the teeth, between them, or at the gum margins; this instrumentation to be followed *in every case* by the thorough polishing of all tooth surfaces by *hand methods*—*power polishers should never be used*—not alone the more exposed labial and buccal surfaces of the teeth, but the lingual, palatal and approximal surfaces as well, using for this purpose orange-wood points in suitable holders (porte polishers) charged with finely-ground pumice stone as a polishing material. Treated in this manner the teeth are placed in the most favorable condition to prevent and repel aseptic accumulations and deposits, and what is of equal importance, it aids the patient in all efforts to maintain sanitation and cleanliness.

“Brushing the tongue” for the removal of infectious coatings has been advocated more recently. Tongue *brushing* is impractical and devoid of utility. A coated tongue, especially if accompanied with tonsular inflammation, may very properly and advantageously be disinfected (mopped off) by the use of germicidal applications on bibulous paper. I have produced marked beneficial results, when finding the tongue infectiously coated, through mopping it off once or twice a day with phenol sodique. There are other remedies for this purpose perhaps equally efficient.

Some Specific Benefits.

Studying more closely some of the specific benefits which result from the oral prophylaxis treatment, we notice first those that accrue to the teeth themselves. Three to six months of this treatment consistently carried forward will effectually change the whole appearance, and to some extent the whole character of a set of teeth. This change is seen in all cases, young and old, but it is specially marked in children and youth and in young adults. The dull, opaque and lifeless aspect of the teeth exhibited in ordinary conditions of nearly all mouths, quickly gives way, under the prophylaxis treatment, to a clear, pure tooth color; the teeth in a limited time become naturally translucent, and present the appearance and true characteristics of living, healthy organs. Teeth that appear as a disfigurement in the mouth, even to disgust and loathing, when subjected for a time to the prophylaxis treatment, become strikingly ornate and attractive. The osseous structures, after a few months, exhibit unmistakably a marked change for the better, and in most cases they become wholly immune to decay. The vital forces within the tooth—the pulp—and those surrounding it—the pericementum and its connections—are stirred and stimulated to new life and activity. Circulation in dentine and enamel is revived and quickened; old, stagnant

colors and deposits are manifestly taken up and removed, and new, fresh material deposited in place of them.

It is most interesting and instructive to witness the awakening and revivifying of the life forces of the teeth under treatment, as exhibited in the discharge of this undue and disagreeable color, in the brightening general aspect, and in the cessation of hyper-sensitiveness and irritability.

An irritating, life-destroying infection continuously adherent to the surfaces of untreated teeth, becomes a condition of violent exhibition in some cases, and when trained to recognize it, it is distinctly manifest in all. This infection retards circulation, hinders nutrition, and greatly interferes with the general health of the teeth. Manipulative treatment and the medication attending its frequent removal, stimulates and fosters the remarkable changes and improvements noticed in the character and substance of all teeth which are the subject of this treatment.

The prophylaxis treatment, as yet, but very imperfectly understood even by its friends, has been called merely a form of "tooth cleaning." Far more than this, it is a manipulative process that positively relieves the teeth from a virulent infection, and introduces a stimulation most beneficial to their internal and external life. If a tooth cleaning process, it is one of profound significance.

If time would permit, instances might be specifically cited and multiplied in which *no* new decay has appeared in mouths, even with complete sets of teeth, for four, five and six years; and many others in which but a modicum of decay has been found in the same length of time, and that chiefly around old fillings.

The deciduous teeth in all cases are quickly and markedly influenced by the treatment. Of the limited number of children under seven years of age who are under the prophylaxis treatment, not one presents a new decay or a new defect in a tooth.

One remarkably interesting and instructive case
An Interesting Case. is that of a boy, a strongly marked nervous temperament, brought to me when but three and a half years of age, in delicate health. At this time there were five large cavities—three approximal—in his teeth, and two places exhibiting such predisposition to decay that I prognosticated cavities in them within three months. Through exercise of patience and perseverance the cavities were excavated and filled, with amalgam. (Perfect operations were impossible.) Immediately following the filling, for an entire year, his teeth were carefully treated every two weeks, barring one month during the summer vacation. Since that time—nearly five years—I have seen him on an average once a month; meanwhile, his teeth have received rather more than the ordinary care of childhood, at home. The boy is now in his

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ninth year, with this record: excessive nervousness arrested; general health fully established; teeth, as to decay, in perfect condition (predicted cavities did not appear); one new pinhead cavity in distal sulcus of left superior temporary molar (probably started before first five fillings were made); one redecay around largest and most difficult of the five original fillings. Twelve of the temporary teeth have loosened and come out, every one in nature's own way, through complete root absorption. First permanent molars, inferior and superior permanent incisors erupted, cuspids presenting. The first molars—erupted at five and a half—have unusually large crowns with strongly marked, pointed cusps and correspondingly deep sulci and linear markings. Formation, shape and time of eruption of these teeth, presaged early and rapid decay; nevertheless, they are at this writing all in perfect state of preservation, and evidently improving in character. Neither infection nor chemical agents are permitted to fasten upon any of their surfaces, and the life forces are evidently building into them a more compact and decay-resisting structural consolidation.

The benefits resulting from the prophylaxis treatment as exhibited in this case are equally marked in every case where deciduous teeth have been subjected to the treatment.

**The Treatment
always
Advantageous.**

Another result, convincing as to the benefits of this treatment beyond all others that can be cited, may be witnessed in connection with many cases in which decay, running riot in both temporary and permanent teeth at ten and eleven years of age, has been practically stopped following the full institution of the prophylaxis treatment. The second, or twelfth year molars, erupting into a healthy environment, have been universally found in perfect condition, and have continued thus far devoid of decay, even in the sulci. Not in one instance merely, but in practically every instance, these conditions exist.

Other and most convincing proofs may be seen in connection with the eruption of wisdom teeth. Perhaps the most noteworthy instance in my practice in this connection is that of a young man, at the time about nineteen, for whom I had operated from boyhood, long antedating the introduction of the prophylaxis treatment. The teeth in this mouth had decayed early and in all directions. Occlusal, approximal and labial fillings are to be seen in all parts of the mouth; even the lower incisors and cuspids had not escaped. The four wisdom teeth appeared about two years after beginning an irregular and unsatisfactory course of prophylaxis treatment, but even with this, the contrast between these teeth and the twenty-eight which preceded them affords a most instructive lesson regarding the benefits of treatment. Despised, misrepresented and condemned to decay and loss, as wisdom teeth frequently are, these teeth (and I could mention a number

of other similar cases) erupting into a mouth which had been but quite irregularly under treatment, were perfect. Decay had appeared in every class of teeth which developed before the prophylaxis treatment commenced; but in these wisdom teeth there was neither decay nor the appearance of it, and this condition pertained until the case passed from under my care.

As a further observation of the benefits of this treatment, I desire to put on record a development of marked significance; namely, a decided modification noticed in the sensitiveness of the dentine of teeth, especially in children, following the institution of a regular and consistent treatment. Diminishing of acute sensitiveness seems to follow as a general result, and not to be some special temporary condition. The extrême sensitiveness in the dentine of young teeth has been so modified and lessened, apparently by this treatment, that ordinary operations for filling have been performed without the intense suffering usually attending such cases. Children and young people who are under this treatment, submit to ordinary operations without compulsion or special complaint. Operations that under the old regime would cause much suffering, if not deemed unbearable, have been greatly mitigated in intensity.

It is an inadequate presentation to say, that the prophylaxis treatment is a marked modifier of sensitive dentine, especially in the young, and that it is a mitigator of suffering under all dental operations. This may seem an extreme statement, but when fully tested by experience it will be received as conservatively true.

Hyper-sensitiveness of dentine is a result of pericemental irritation far more than of pulp irritation. The external and most important life of the tooth—the pericemental life—is markedly influenced by the irritative infection found always at the necks of untreated teeth. Removal of this infection is the removal of the cause of much of the undue sensitiveness of dental tissue.

The benefits which accrue directly to the teeth are not more manifest nor more pronounced than such as immediately appear in the pericementum and gums. The presence of irritative infectious matter on the surfaces of untreated teeth, sufficient to affect the pericementum and surrounding gum tissue, is found in connection with all untreated teeth. It appears coeval with their eruption, and continues, in ordinary conditions, as long as the teeth are retained. It is bounded only by the extent of the dentate surface exposed in the mouth; as a result, the pericemental tissue and gums in ordinary mouth conditions are perpetually in a state of undue sensitiveness, and not less, a condition of undue, often

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extreme, vascularity. Under the prophylaxis treatment, through which all irritants are removed, these tissues quickly lose their extreme and unnatural sensitiveness, and recover the normal condition of low-grade sensibility. (Gum tissue in a state of health is always without acute sensation.) The circulatory vessels also lose the unnatural distension and tumefaction consequent upon irritation, recover tonicity, and contract to normal dimensions. Three to six months of treatment will remove all marked sensibility and tendency to bleed, and operations for filling at cervical margins, especially on the upper jaw, can be safely and easily performed without the use of the rubber-dam. It is the irritative, toxic matter at the necks of the teeth that occasions the sensitive states and highly vascular conditions of the gums and pericemental tissue. A mouth with teeth freed from this infection and kept in an aseptic condition, will have gums tense and hard, without vascularity and without undue sensibility.

We have, then, to commend the prophylaxis treatment: first, for its prevention of decay; second, for its stimulation to external and internal life and health of the teeth; third, for its influence in decreasing sensation in dentine and gum tissue; fourth, for its correction of the undue vascularity in gum tissue; and fifth, for its positive removal of all infection from the mouth and ultimately from the breath.

Self-Treatment by Patients.

It may be well to enter somewhat into detail respecting the care and co-operation expected, *even required*, of patients under the prophylaxis treatment.

In the beginning, for four to six months they are required to present regularly, on appointment, once a month for treatment, which is carefully applied, using only hand methods as heretofore described. Every patient should be armed with proper appliances, especially brush and dentifrice, for cleansing the teeth and mouth, and fully instructed in the use of the same.

The toothbrush, which is the main reliance of the patient, is at best an inefficient instrument for cleansing teeth. It is, however, the best our civilization has produced, hence until something better is devised, necessity compels the use of it: of the hundreds of shapes, varieties and kinds on the market, very few are suitable for use. Unfortunately the choice and *selection* of tooth-brushes for the general public is now largely relegated to salesladies in the department stores, and the preparation of dentifrices and so-called mouth-washes is in the hands of druggists; a condition of things as incongruous as is the compounding of medicines by the postoffice clerk in a general country store. Would not dentistry itself be greatly embarrassed, if not awkwardly handicapped, if suddenly confronted with

a demand, from kingly authority, for a really efficient tooth-brush or dentifrice? Probably not one in a thousand could present a clear, consistent idea of what the character or shape of a brush should be to best do the work of cleansing the teeth.

It may be said without hesitation or fear of contradiction, there is no part of the human body which is so imperfectly and ignorantly cared for as this most important cavity containing the teeth. Attending to the teeth by the patient is a matter which has neither been studied nor taught either by the professionalist or the laity. The child is *taught* to wash the hands, to bathe the body—but the human mouth, the very vestibule of life, is left wholly without intelligent care.

Witness the education of the average child in a matter of such vital importance: After breakfast (occasionally), "John (or Mary), have you brushed your teeth this morning?" "No, ma'am." "Well, go right away to the bathroom and brush your teeth." Has the child ever been taught rational methods? No. Examine the equipments placed in the hands of childhood for this important operation. Even when new, a cheap, illy-adapted brush and unusable dentifrice (good enough for the children) is all they can find. This want of intelligent instruction, and these careless methods in childhood, follow through life.

The results are everywhere seen in repulsive exhibits of decayed, infection-coated teeth, offensive breaths, a display of discolored fillings, and that dental monstrosity, so common—the gold crown.

Solomon said of the teeth of the daughter of Zion, the perfection of beauty, "Thy teeth are like a flock of sheep, even shorn, which go up from the washing whereof every one bearest twins, and there is not one barren among them." A most beautiful description of a perfect, thoroughly-cared-for set of teeth.

The general public, compelled to rely on the tooth-brush, is yet without proper equipment for cleansing the teeth. The whole operation soon becomes distasteful, irksome and generally the merest farce. Patients present with mouths reeking with infection, teeth loaded with deposits that are antiquated, and affirm "that they are very careful about brushing their teeth."

All this should be changed. It can only be done by a process of education, and that through instruction given by dentistry. Every dentist should first inform himself, and then fully instruct individual patients in the details of the care of the human mouth. The people should be taught that cleaning the teeth is not merely the *possession* of a tooth-brush. The best-shaped brush in the world will not clean the teeth in a human mouth unless it be intelligently used.

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The Tooth-Brush. A tooth-brush should possess the requisites of shape, substance and stability. In shape it should be plain and perfectly straight, the bristles neither coarse nor fine, set in rows of different lengths; in substance, all of the best materials. There should be no concavity to fit the arch when the brush is at rest; no fancy curves; no tufts of bristles at the end. It should be of size, in length and width, to form a mass of bristles to cover the teeth and give stability and substance when in use.

Use of Tooth-Brush. In using the brush, it should be passed over labial, buccal, lingual and palatal—or the whole outer and inner surfaces of the teeth, with a vigorous *horizontal* movement, the hand adapting the brush, as far as possible, to all tooth surfaces. With care and a straight brush all parts of the exposed crowns may thus be reached and cleansed as well as a brush can do this office work. Attempting to cleanse the teeth with the vertical movement, using a concave brush, as some teach, on the convex surface of the dental arches, while of little avail, will do no harm, either to the teeth or gums. Such use of the brush in a measure relieves the interstices of food remains, and thus assists in a work that can be much better done with a tooth-pick. The most widely advertised, and perhaps the most popular tooth-brush of the present, is the so-called “prophylactic.” This brush, and all similar in shape, is a conspicuous example of lack of adaptation of means to an end. It demands the vertical movement of the brush on the external surface of the arches and on the inner surfaces it presents a double bow, most effectually preventing contact of any considerable surface of the brush with the most uncleanly portions of the teeth. A plain brush, with horizontal movement, is much better and much more efficacious.

It has been urged that the vertical movement of the brush acts as a kind of massage, tending to brush the gums on to the teeth, while the horizontal movement brushes them away from the teeth. This is the merest *theory*, a statement wholly without justification in actual conditions. The vertical movement of the brush is not more a massage of the gums than is the horizontal movement. There is no process of brushing which approximates a massage treatment of the gums, and it would avail nothing if their could be. My patients are always instructed, in connection with the prophylaxis treatment, to use the brush with a vigorous horizontal movement, even when the gums and alveolar process have necrosed until the festoons have become everted, and to continue the brushing until the teeth are not only brushed but *cleansed*. I have never yet seen a case in which reformation of tissue has not followed the treatment, and in all

cases not connected with pyorrhea, restoration of the festoons has been complete and perfect.

The tooth-brush implies a dentifrice, and a dentifrice is demanded for cleaning the teeth. To attempt a review of the compounds under the head of so-called dentifrices, would consume far more time than is allotted this paper. We can only say of the tooth powders, tablets, washes and pastes sold as dentifrices, while they are manufactured and sold largely through the greatest empiricism, and while some are far more efficient and pleasant than others, few of them can be classed as positively harmful when used within proper limits.

So-called tooth powders are compounded from some base, generally prepared chalk (*calc. carb. precipitas*), orris root (*iridis Florentinæ*), acidum salicylicum, or some other material. To the base selected may be added, according to the fancy of the druggist or compounder, white sugar, soap, soap-bark, cinchona, cinnamon, cuttle-fish bone (*ossis sepie pulveris*), pumice stone (*lapidis pumiceï pulveris*), flavoring and coloring, or whatever may be supposed to make a pleasant and stable preparation, to be advertised and sold "for beautifying the teeth and imparting sweet odors to the breath." We are not altogether decrying these powder preparations, for something of the powder or soap nature is demanded always, with the brush. Patients should be taught to avoid all pastes or liquid dentifrices, for they are not only inefficient, but frequently harmful. A good soap, as a pure Castile, may be used *ad libitum*, and always with benefit to the mouth.

**When to Brush
the Teeth.**

The impression very generally prevails that the time for brushing the teeth is after meals. This is a fallacy for dentistry to uproot. To receive the greatest benefit from the use of the tooth-brush, the mouth should be thoroughly cleansed always just *before* meals. Infection gathers upon the teeth in the interim between meals, when the salivary glands are at rest and the teeth not in use; it is during periods of rest that the mucous secretion and mucoid excretions from mucous surfaces are lodged upon the teeth in greatest quantity. Cleansing the mouth and teeth from this viscid debris *before* meals, prevents these washing of toxic tooth accretions into the gastro-intestinal tract with the food. Who is not taught to wash the *hands* before meals? Of how much greater importance is the cleansing of the human mouth! If the accustomed method with the brush is not practicable, it may be always practicable to thoroughly rinse the mouth with water and to wipe the main exposed surface of the teeth with the corner of a towel or napkin. This method of cleaning the teeth is not enough in vogue. After meals, the teeth may be freed of food remains

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with some form of took-pick, preferably the "quill," which is all that is required. Careful cleansing, devoting not seconds but minutes to the operation, should always precede retiring for the night and immediately succeed rising in the morning.

Cleansing the mouth thus frequently, and at stated periods, will greatly tend to preserve the teeth from decay, and surely lessen the inroads of systemic infection.

Another View of Mouth Infection.

The photographer who would make sure of a satisfactory picture, having made one negative, will frequently change the position of his subject for another view; he may move the head into another light, readjust the camera and screens, or perhaps rearrange the shading. That we may fasten upon the mind and carry away with us a more vivid and lasting picture of these adverse, repugnant and hurtful mouth conditions, let us here endeavor to secure a picture from another point of view.

A Mr. McC. quite recently applied for relief from one of the most unpromising conditions of pyorrhea it has been my good fortune to encounter. I say "good fortune," for I regard it as good fortune that through study and practice of the oral prophylaxis treatment the dental profession is now able to throw off the shackles which have so long held it in bondage to the commonly accepted theory that alveolar pyorrhea is a *disease* of constitutional origin, and incurable. It is good fortune as well as a great pleasure to bring relief to a long list of afflicted ones, and to proclaim the fact that alveolar pyorrhea is not a *disease* in the true meaning of that term; that it does not result from the gouty or uric acid diathesis; it is a pleasure to proclaim that it is not a result of some "constitutional vice" nor of any special constitutional condition. The glamour and charm of mystery no longer hangs over this affection; the light of rational, indisputable, scientific truth shines through the mists and clouds of speculation and theory which have so long enveloped it.

What Alveolar Pyorrhea is. Alveolar pyorrhea is not properly classified as a "disease." Its very definition—flow of pus—implies that it should be taken from the category of diseases and placed among the inflammations. Properly defined, alveolar pyorrhea is an inflammation within the confines of the pericemental membrane and contiguous tissues; an inflammation due wholly to the irritation resulting from stagnant septic matter adherent to the surfaces, necks and roots of natural teeth. It need no longer be said that these are "constitutional conditions, complex in their manifestations"; neither that their "medical and hygienic management are almost exclusively in the hands of the physician." How utterly absurd is the proposi-

tion that the "duty of the dental practitioner is confined largely to the question of diagnosis." Treatment of pyorrhea relegated to the medical profession! *Neither* diagnosis nor treatment belongs to medicine; it is a mouth disorder strictly within the realm of the dental practitioner. It is to the discredit of dentistry and not of medicine that such inconsiderate and contradictory teachings prevail respecting it. It is a mouth affection in association with the teeth of which medicine, as a profession, has never assumed to know. Occurring in mouths with large, strong and apparently healthy teeth, how should medicine suspect that it is largely, if not entirely, the prime cause of renal disturbances, uremia, diabetes and albuminuria; and many other constitutional disturbances of which we know so little?

I here exhibit casts of the mouth referred to as it presented from the hands of one of the fashionable dentists of Philadelphia. It is a typical case of pyorrhea. A married man in middle life—38 years—with hard, strong teeth, crowns large and irregular, roots not long and probably conical; marked cervical constriction, and pericemental tissue scanty. This gentleman is a smoker, but not given to excesses or vices; had brushed his teeth latterly with so-called "prophylactic" brush after approved methods, vertical movement.

As through this case, we look upon the horrible conditions in human mouths everywhere, in high and low born, king and peasant, and realize that they are wholly due to states and conditions of natural teeth, and so largely preventable, shall not we rise as witnesses for, and to advocate better things for neglected, untaught, suffering humanity?

But to return to this typical case of pyorrhea: The broad-bladed scaler of the Smith set was passed back to the lingual surface of the second lower molar, where it was loaded with years of accumulations of calcic toxins, recent exudations of globules of pus, and gatherings of every variety of mouth debris. This conglomerate mass of revolting matter was held up to view, and the patient asked if he would like to handle it, to smell it, to taste it, to have it returned to the mouth. To all of these suggestions there was prompt declination. Then it was clearly explained that matter of similar nature is found on all untreated teeth, and that teeth are not on the outside of the body, *but inside the mouth*; that such conditions exist, not one hour in the day, but twenty-four hours of every day; not one day in the year, but three hundred and sixty-five days of every year; and further, this infectious matter on the teeth *in the mouth*, is in a temperature constantly maintained at 98.6 deg. F., than which nothing could possibly be more favorable for germ culture, for imparting odors to the breath, nor for filling the lungs with infectious emanations.

From the mouth and teeth, septic matter is being conveyed directly into the gastro-intestinal tract, thence to the circulation, whence it may be

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deposited in any organ or tissue, and become the nucleus of serious chronic, systemic maladies. To emphasize the continual presence of this deleterious matter, the patient was told he could at any hour of the day draw floss silk between the teeth, or pass the finger over their surfaces, and discover most repellent odors; or he could recall the unpleasant taste in the mouth on rising in the morning, the fetid breath especially at night, due not to stomach conditions, but to the stagnant, odoriferous matter on the teeth. Becoming dry, through inactivity of the salivary glands, the teeth send out into the breath of the sleeper poisonous emanations to do continuously a work of infection, unnoticed and unsuspected.

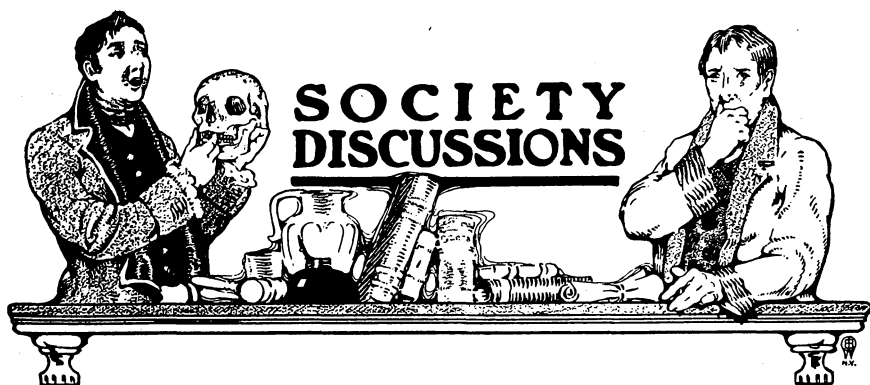
I would that it might be recognized by all, that sequences of the universal infection on the teeth in the oral cavity, are, in our present civilization; affecting the health of humanity to a greater extent than any other one physical condition. I could wish nothing grander nor better for our profession, than that it should see and embrace the magnificent opportunity unfolded in oral prophylaxis to move forward and occupy this new field of untold benefits.

Dentistry, in these revelations respecting states of infection ordinarily existing in the human mouth, has opened a door for general etiological research of far-reaching importance.

The secrets of tooth decay, in and of themselves, are of minor consequence in comparison with the systemic infections due directly to states and conditions of the teeth in the mouth. We venture to predict that recognition will ere long be made of the fact, that tuberculosis—that decimator of homes—and possibly other grave chronic disorders—can find no soil for development in a system kept from the contaminations of mouth infection through a rigorous prophylaxis treatment from childhood.

We have abundantly proven that diabetes and many gastro-intestinal troubles are directly traceable to the mouth infection of alveolar pyorrhea; also that many pharyngeal and tonsillar inflammations and many skin troubles, have their origin in infection in the mouth, due to septic states of neglected teeth. We know, also, that mental depression and hypochondria, and many of the perplexing nervous conditions in women, result from the same cause.

Dentistry alone has the power to relieve humanity from the plague of mouth infection. When shall it command its own rightful place among the specialties of medicine?



Boston and Tufts Dental Alumni Association.

The Boston and Tufts Dental Alumni Association held its regular meeting Wednesday, December 9, 1903. Dr. B. H. Strout, under the head of office practice, reported the following case.

**Interesting Case
of
Replantation.**

Mrs. C. F. aet., 28; born in France, but has lived in the United States since a child. Mother of two children, 7 and 3 years of age. General condition of health excellent. Has always been well, and never had any of the usual children's diseases. A petite woman of good physique.

While riding her bicycle in the afternoon of September 21, she was thrown violently to the ground by the breaking of the front fork, striking on the car track. She was taken to the office of a nearby physician, who found imbedded in the tissue of the lower lip the mesio-incisal corner of the left upper incisor (central). The piece of tooth was removed and the lip sewed up. The patient remarked on the elongation of the right upper central and lateral incisors, but was told by the physician that that was the natural condition, at which she was considerably provoked.

The following morning she presented herself at the clinic of the Tufts College Dental School. The condition at entrance was as follows: Nose, right cheek and both lips considerably bruised and very greatly swollen. The upper right central and lateral incisors fractured well above the gingival line. (The fracture of the lateral was not recognized until two days later.) Suffering intensely from pain in the teeth.

The crown of the right central was removed and two days later the corresponding portion of the lateral. The patient was directed to save the crowns which were perfect, in hopes that they might be attached to the roots later.

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About three weeks later (October 12) the patient came in to see what might be done for her. She had suffered and was still suffering a great deal of pain from the remaining roots. The gum tissue had grown over them in such a way that it was impossible to cleanse and fill the canals as they were. Under the circumstances, it was deemed best to remove the two roots, which was accordingly done, using ethyl chloride as a local anesthetic.

The roots came out smoothly, and the crowns fitted accurately at the fracture, so replantation was decided upon. The pulp canals and chambers were cleaned out, the canals filled to the apex with gutta percha. The crowns and roots were next united by means of a wire pin and cement. The next morning the mended teeth were soaked for a time in 10 per cent formalin solution, replanted under eucaïne anesthesia and wired in place. Phenol-sodique was ordered as mouth wash every hour.

The patient was again seen three days later. A portion of the gum above the central had sloughed away, but otherwise the prognosis seemed favorable.

After a period of about one week, during which time they were extremely sensitive, the replanted teeth became quite firm in their sockets, and have since given no trouble. On December 7 she came in to have the retaining wires, which were causing some irritation, removed. Both teeth were firm. The appearance of the lateral was good, the neck of the central was exposed nearly or quite to the line of the fracture.

The teeth had naturally been in close proximity to each other, but the missing corner of the left central had allowed them to incline somewhat toward the median line.

The patient is now able to use the teeth in all ways, as formerly. The prognosis, according to my judgment, is loss of the roots from absorption in a few years.

The president then introduced Dr. B. Holly Smith, of Baltimore.

Ladies and Gentlemen: It is a very great pleasure, indeed, to be here in Boston with you. I have been here before, and from past experience I did not expect that I should find over the door of your meeting house any such forbidding and threatening sign as "Beware of the dogs," "Ring the bell," but that I should find the good, plain Saxon words, "Come in and be at home."

I am especially glad to come to you, the Alumni of the Boston and Tufts College. I have the kindest recollection of your former Dean, Dr. Follett, and remember the kind and sensitive but sympathetic heart that I always found beating true to what was right. I have had an opportunity

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also to get acquainted with Dr. Thayer, Dr. Branigan and the other men who conduct affairs today, and I very highly esteem and love them.

It is rather unfortunate that a man in my situation, who is as fond of traveling as I am, should have to work for a living. I am compelled to stay at home occasionally and fill a few teeth; but for that, I should come to see you often, and I have no doubt you would get quite tired of me.

I have thought of you in Boston in regard to your professional life, and it seems to me there is a very great responsibility resting upon you here. You are the oldest section of our country and you ought to represent for us in America the dentistry of this country. I have thought sometimes, when at a National Association meeting, that perhaps there was something wrong with your power house, that your light did not extend as far as it ought to. While you send representatives to the meetings—there are a few men you could not keep away—you could not keep these two fellows here (indicating) away from a National meeting by a barbed-wire fence; they are like the men who went to Cuba; they have something to cut wire with; they are bound to get through; but you do not send enough of your men. There are not enough coming to our National meetings today. It is not fair to yourselves. It is not fair to us, that you lock yourselves up in this rock-bound section of our country and do not come out to give us a chance at you.

I come to you this evening not with a paper, for it occurred to me that perhaps we might get better acquainted if we just talked together. I will ask you to listen to a discussion of "Some Features in Our Operative procedure." Dr. Smith then discoursed on this subject.

Discussion of Dr. Smith's Discourse.

I have enjoyed the evening very much. But
Dr. Mitchell. there is one thing that I want to criticize, and that is exposing the pulp and destroying it. I would give quite a little if one other gentleman were here tonight—my friend, Dr. Barrett, of Worcester. I think it would be worth much to him. It is the first time I ever heard any statement of that kind. The first time I ever heard that it was necessary to open up a pulp and kill it. The doctor in our controversies on the subject has always advocated capping it.

Perhaps, if I may add something to the subject of cleanliness, I would suggest to our friend, Dr. Smith, to go back a little farther than the consideration of the patient, and bear in mind that the patient is at the same time looking after us. I would suggest our having a demonstration on the part of the operator to show that he is in a clean condition—in a condition to make himself presentable to the needs of the patient. I have had occasion to notice, and it is a fact that Dr. Branigan advises the young

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men that they should be presentable to their patients; absolutely clean, both as to their instruments, hands and attire. He instructs his students in that direction especially. Out of a class of fifty, I will say that there were quite a number who were not in a condition to properly present themselves to their patients, to say nothing about their work. If they had a sweetheart they never would win her if they appeared before her as some of them did when about to perform the operation assigned them.

As to the matter of non-cohesive gold, I sympathize with Dr. Smith. It is hard to use, and requires a great deal of work. If I had my way, after observing some of the work done with the dental engine, I would strike that from the students' list of instruments, for a while at least. I have often thought of the way those engines are allowed to rattle on, and the rapidity with which they will operate them—the young fellow who has had little experience. It is a dangerous weapon without very great care. As to the matter of manipulation in preparing a cavity, I think if they could have a few weeks' instruction in cutting away the teeth properly with instruments and filling cavities without an engine, perhaps it would be worth more than many times that amount of time when they are allowed to do the same work in a rapid manner with it. After that experience, they could perhaps go along easier.

As to the matter of destroying the pulp, the quicker it is done the better. The cocaine method seems to work admirably. I was shown by Dr. Maxfield, the other day, his method of doing it. He used a small instrument on the end of which was a right-angled steel shank, over this was a little piece of rubber tubing. He says he never has a failure in forcing it through the pulp. He puts the cocaine into the tubing and places that over the cavity wherever he wishes to use the cocaine. Dr. Maxfield has used that instrument for quite a while with perfect success. I have removed three pulps in one day without the slightest pain. Since, I have had one case where I spent half an hour and could not destroy the pulp. There was so much congestion I couldn't manage it.

I want to say that I have been very much interested in the meeting and everything that has been said here. There have been so many points touched upon it is hardly possible to cover the ground entirely.

I think the matter of using arsenic is an interesting subject, and one on which we hear a great many different reports. Why is it? I believe that it is because almost everyone uses it differently. One man will use a large quantity of it; that is, comparatively large, and another man will use a small quantity. I believe there is a right way to use arsenic, and when so used it is a very valuable drug; for instance, I, myself, have had the best results in the use of arsenic when using a very small quantity

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and allowing it to stay in the tooth about six hours. That is long enough. When I am about to use arsenic I generally tell the patient to come in at nine o'clock in the morning, and return at three in the afternoon, when it is generally possible to extirpate the pulp painlessly. Of course, it is possible to get along without it, but at the same time it does save valuable time. To get along without it, we can take the dental engine and destroy the pulp, under a general or local anesthetic, especially when the pulp is inflamed and arsenic has no more affect on it than water upon a duck's back. If we take 1-50 of a grain of arsenic and an equal quantity of cocaine and mix it with trikresol and make a comparatively thick paste, say of the constituency of butter, then apply a minute quantity of it directly to the pulp and leave it for six hours, it will be possible to extirpate the pulp painlessly. After the pulp is extirpated it should not be left open with a dressing in it that will allow infection to enter the pulp canal, but the canal and tooth should be filled at once. There is very small chance of any trouble following. I have over one hundred recorded cases of this kind, and every one has been successful with this method.

The question was discussed: Does not the effect of arsenic extend beyond the apical foramen? If it does we get as a first symptom periodontitis. If there is no inflammation in the peri-apical tissues, it is apparent there is no arsenic effect beyond the foramen. I think it is very necessary to bear in mind that the use of arsenic is always attended with some danger. Recently, I saw a case where arsenic was applied and it had leaked out into the tissues. The result was necrosis. I removed the sequestrum between the bicuspid, and there was no further trouble; so it is a dangerous thing if it gets out of the cavity and into the tissues. There is bound to be trouble, and we can never tell how far that trouble may extend.

The dental profession is under great obligation
Dr. Brigham. to Dr. Smith, of Philadelphia, for what he has brought forward. Now, this is not original with him. Many years ago Dr. Riggs practised the same thing, but he never put it on the systematized basis that Dr. Smith has. I happened to be one of the few whose names were sent in to Dr. Smith to attend the clinic which he was to give, but unfortunately for me, Dr. Holly Smith and a few others got ahead of me, and I was left out.

A man who has never practised prophylaxis in a systematic way has no idea of what he can do or how quickly he can restore an unwholesome mouth to a wholesome one. He can change the condition of the saliva from a thick to a good, healthy, thin saliva.

It is a difficult matter to remove these deposits from the necks of the teeth. These deposits we have in two different forms. We have this

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dark deposit that gathers around the neck in a ridge that is easily removed, but we have another that forms in a thin layer and goes down deep under the gum. This is difficult to remove, and might pass observation, but if you will once break through that deposit you will find the enemy of the teeth, and you will find that you can scale it off. As Dr. Smith says, many times it cannot be removed at one sitting, but it can be removed after some time. You can remove the greater part of it with the scalers, but you can never get it smooth until you polish it with pumice stone and the orange stick. I have made the remark many times that it was like cleaning rust from a piece of steel. You can get off a great deal of it by scraping, but you cannot get it smooth until you polish it.

Dr. Smith spoke of looking at our business in the light of the patient. That is what we should all do. A merchant looks at his business as a customer does, and so strives to please the customer. We should look at our work and make a study of it from the patient's side, once in a while wonder if we would want such and such a thing done for ourselves. I never allow myself to do for a patient what I would not want or would not be willing to have done for myself. That is one of the reasons why I do not grind down many teeth to put on a gold crown.

Patients, in the matter of prophylaxis, will readily co-operate with you, and are willing to come as often as you can take care of them, if you will tell them what you want of them.

As to the use of the rubber dam, I could not get along without it at all. I can do simple operations without the dam, but they have to be very simple. I can apply the rubber dam and get through with the operation much quicker and know that the result is to be quite satisfactory.

As to the use of matrices, I use them continuously, but I do not use those that are prepared and on the market. I make, like Dr. Ainsworth, one for each case. I can cut out the matrix and put it in place and hold it there in a few minutes. I wedge it up with cotton. That may seem like a soft wedge, but you can do it for plastic filling, and it holds it in place very well. I have filled many medium-sized cavities with gold with the matrix held up with cotton only. You can hold it up there as tightly as you wish to.

As to the use of arsenic, I do not see how I could get along without it. Of course, we do not know its limitations, but what has never troubled us ought not to bother us much.

As to the use of porcelain, with me that would be indispensable today. It is as useful to me as any of the fillings which we have. We have four or five filling materials and every one has its place. Cohesive gold I use in the anterior teeth where I think it best. I do not feel sure of putting in a thin cavity with porcelain, and I never do it where it comes to great stress.

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On corners I use a pin baked in the porcelain. This is of great advantage. You may think it is a very difficult matter to bake a pin in porcelain, but it is just as easy to bake a pin in as it is to bake it without. There may be certain corners which you hardly have a chance to put the pin in, although the porcelain would look the nicest I believe that many of those teeth could be restored to greater usefulness by using gold. They may equal what I saw today, some corners built out in gold in frail teeth some six years ago, and they looked just the same today as they did the day they were done.

The use of cocaine in the destruction of pulps is
Dr. Geo. C. Hinsworth. most excellent. Dr. Smith hazarded the bet that there is not a dental office in Boston where arsenic is not used. I wish to take that bet. I have had no use for arsenic for the past two or three years. My method is the same as he has described, except I use beeswax re-enforced with a pledget of wet cotton instead of the soft rubber. This produces a dead pressure and holds its place after the instrument used in forcing it home is removed. This seems to me an advantage. I queried when he spoke of exposing the pulp. Why should you wish to expose the pulp if it is not already exposed? I fear many pulps are unwisely sacrificed where crowns and inlays are inserted, when the interests and comfort of the patient might be better served by saving the pulps. I have had much trouble where there was a high state of congestion in getting the cocaine to act. Perhaps the adrenalin chloride solution will be a help in such cases. I have used a preparation of cocaine, atropine and morphine, put up by Parke, Davis & Co., with most excellent results. It seems to me that if dentists understood the matters of detail in the use of cocaine better there would be less arsenic used. Not understanding these matters of detail, they give it up as a failure and go back to arsenic.

I am glad to hear Dr. Smith speak in commendation of the matrix, for outside of Dr. Louis Jack, I believe Boston is pioneer in its use. It certainly has been dosed out to you generously at my hands. Could I have known twenty-five years ago what I know today regarding the use of the matrix, I could have saved my patients and myself many a tedious hour. I would go further than Dr. Smith and say that by its use we save one-third the time, are able to utilize the good qualities of both non-cohesive and cohesive gold, produce far better insurance against future decay, fill teeth with gold that otherwise would be impracticable, and in every way find it an advantage. The men who speak of the matrix as "a snare and a delusion" are not masters of the detail in its use. Ready-made matrices have never found much favor with me. I prefer to make the matrix myself for each case. It takes but two or three minutes to make a matrix, using what is known as cold-rolled French steel, which has a temper peculiar to itself.

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This is readily burnished on a large piece of Faber's erasion rubber into the desired shape, and may be held against the teeth in a variety of ways. Where you have two compound approximal cavities facing each other in bicusps or molars, the matrix is readily held in position for one by filling the other with pink gutta-percha; again it may be ligated on or held by a Perry separator. Many times a bit of orange wood at the cervical wall is of advantage.

One advantage in the matrix made by yourself is that you throw it away when you get through with it, thus avoiding the care and sterilizing. It is very simply made, and to my mind it fills the bill better than any of the matrices I have ever seen. Some of the contrivances are very far from what they should be, and do not aid but really prevent doing contour work in the full sense of the word.

As to the matter of filling front teeth with gold or porcelain, there are certain conditions under which I am as yet unable to do as satisfactory work with porcelain as with gold, still I find that I am using more and more porcelain inlays as I surmount the difficulties that are presented in its use. I have been rather slow in taking up porcelain work, waiting for others to get the road well trodden down.

The President.

I will call upon the essayist to close the discussion.

Dr. B. Holly Smith.

I want to say, gentlemen, I am more than grateful to you for the kind expressions which I have heard.

Dr. Smith.

It is very pleasing to have people say nice things about you, and the Doctor said that some people would travel quite a little distance to see me. That's nice. It is most gratifying to me to feel that my effort this evening has been helpful, and has had such a cordial welcome.

I want to thank you all, and say that if at any time you should walk in your sleep or wander away from home on account of some domestic infelicity, if you get down across the Mason and Dixon Line to the little town of Baltimore, you will find the latch-string at No. 1007 Madison out, and I will be very glad to see you.



New Jersey State Dental Society.

34th Annual Meeting.

The discussion of Dr. White's paper was here interrupted to allow the reading of Dr. D. D. Smith's paper after which the discussion was continued as follows:

Dr. R. H. Hofheinz.

Do I understand Mr. President that the discussion of Dr. White's paper is closed?

President Sutphen.

Oh, No!

Dr. Hofheinz.

I knew that I would have one or two points to refer to in reference to Dr. Smith's paper and therefore I did not take the floor before.

I heard some years ago, in the city of New York, a resumé on pyorrhea alveolaris by Dr. Harlan, which led me to say I considered him the "secretary" of pyorrhea alveolaris, and it was the most wonderful resumé of that disease I have ever heard. He discriminated at that time, and I take the liberty of discriminating today between certain causes of pyorrhea alveolaris.

I personally do not believe that all cases, not even all the cases that come under the treatment of so skillful a man as Dr. Smith, or Dr. Younger, can be cured by local treatment, and the treatment that Dr. White has recommended, by lactic acid, is only one of the many that Dr. Harlan spoke of when he read that paper in New York. I have personally tried lactic acid, and in my hands I have not found that it has done as well as some of the other escharotic stimulants, and I have given the preference to trichloracetic acid, which is an escharotic; and by reducing it it becomes a stimulating escharotic, which lactic acid only becomes to a very limited degree, and this only shows that in the hands of different men the treatment of pyorrhea, with a certain remedy and certain method, always with the foundation of thorough removal of the calculus is different altogether in different cases, so far as results are concerned.

I have had one case of which I spoke at the National meeting some years ago. It came under my observation when the lady was about sixteen or seventeen years of age. The second bicuspid was so loose at the time that it was removed. There seemed to be no alternative although I did not do it myself; it was done by the dentist where she went to school in a small place, I think here in New Jersey, where they do such things. (Laughter.) The child, at about that age had lost some of the sixth year molars, but I am sorry I am not prepared now to give you an absolutely finished statement of the articulation. In that case I tried all methods

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known to me, from the very beginning, such as the cleaning of the socket and the application of every remedy I knew. I sent her to numerous very prominent men, and I was about to send her to Dr. Harlan, of Chicago, where, however, she did not go. She went to Milwaukee where she remained for some time, and got into the hands of Dr. Brown with a confrère, Dr. Richter. That gentleman practically regulated that young lady's teeth; he drew together all the front teeth and bandaged them, he regulated all the posterior teeth, and put in a small bridge, if I remember right on the left upper side, where there was a missing bicuspid, and that case came to me apparently cured. There was a good deal of disagreement at that time between Dr. Brown and myself as to what had really cured the case. I have always thought that in performing this mechanical operation he changed the physiological condition of the pericementum. He made the diagnosis that the case was merely one of malocclusion—but it was not sufficiently "mal" to produce a case of pyorrhea such as that was, and I believe that in changing the location of those teeth the physiological character of the pericementum was changed thus giving that young lady a new pericementum and with all due respect to Dr. Smith, that if that case had gotten into his hands I do not think he could have made a perfect cure with all the prophylaxis he might have applied. I have another case which I will speak of in discussing Dr. Smith's paper.

The Violet Ray. Concerning the use of the violet ray I have this to say, I have for some time used a galvanic current in a general way. There is a concern in Rochester which is making an apparatus which produces the high frequency current and they showed us two cases where they have done nothing but to surgically remove the salivary calculus and apply the violet ray three or four times, and the cases have ceased to exude pus; the gums have a wonderfully pink appearance, a good deal the same as those of patients I have seen in Dr. Smith's office, which I will refer to later, but the tooth remains loose. That indicates that it has destroyed the deposit, that it has reduced to a great degree the diseased character of the gum but it has not restored the adhesion of the parts themselves, which later on probably may be restored.

I have not had an opportunity of reading Dr. Smith's paper; if I had perhaps I might find more opportunities for disagreeing with him, but I have this to say concerning it.

Discussion of Dr. Smith's Paper. A few days ago I received a letter from Dr. D. D. Smith, in which he informed me that he could not send me a copy of his paper. This will naturally compel me to generalize which is a disadvantage because it is not a discussion of the paper in detail. We are living in an

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age of extension for prevention in more senses than the one which applies to approximal cavities of bicuspid and molars. We have extended the sewerage system of our cities to prevent malaria, typhoid fever, etc., and the many ills human flesh is heir to. We have extended our surgical skill to a degree that many appendices are prevented from existing which, in olden times would have comfortably rested in the abdominal cavity. We are extending our knowledge in every other possible direction to prevent disease, and give every human being that degree of comfort and security to which the advancement of the twentieth century entitles him. There is no reason why dentistry should not have followed in the footsteps of its sister profession.

We have at all times cleaned teeth and used more or less prophylactic methods to render the mouth sweet and make it a beautiful portal to the more mysterious and less clean anatomy which follows and completes the oral cavity. It is only in recent years, however, that our attention has been given to the prophylaxis of the mouth as an extension of our profession for the prevention of tooth decay and other pathologic conditions of the oral cavity.

Some years ago Dr. A. C. Hart, of California, read a paper before this society on the systematic use of formalin to render the tooth substance immune from decay. I had the pleasure of discussing that paper and expressed the hope of seeing definite results from further experiments which, however, were evidently not continued.* Dr. Bryan, of Basel, Switzerland, had something to tell us at the International Dental Congress on the prevention of decay by the systematic use of nitrate of silver. I have more faith in this drug than I had in formalin though we know its great limitations.

For some years Dr. D. D. Smith, whose paper I am to discuss, has told the profession that he had instituted a systematic prophylaxis by which he prevented the decay of the teeth and cured pyorrhea alveolaris. But a very few believed in this statement and some of the gentlemen who have seen his results refuse to accept them unqualified, even today. I have spent six hours at Dr. D. D. Smith's office, examined patient after patient, and am in fairly good condition to pass judgment upon the things I have seen. I am not given much to eulogizing, but as I have a very keen sense of the beautiful, aside from the general dental sense, my vision was first drawn to surfaces of enamel such as I have rarely seen in the healthiest mouths and most perfect teeth.

The question at once arises: What had produced this wonderfully brilliant enamel surface? Dr. Smith says the stimulation of the nutritive

*Dr. Hart died.—EDITOR.

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organ of the tooth, together with the mechanical process of repeated friction with the stick and pumice. I doubt the first part of his view. I can not see how even the most frequent prophylactic treatment with stick and pumice can have a physiological influence on the inner part of the tooth through this dense structure of enamel. I consider it a physical process per se, the same as we find on the surface of the hardest rock produced by continuous falling of a drop of water. A semi-lateral treatment of the teeth together with microscopic sections of the treated tooth in contradistinction from the one which has had no prophylaxis, could definitely decide this question.

What of it? Has it detracted from the value of Columbus because he did not make his landing with a modern steamer running twenty-four knots an hour or a submarine boat, instead of his old fashioned sailing vessel? The fact remains that those enamel surfaces are kept so scrupulously clean that no food can lodge on any of the surfaces, no microbic plaques can form, no fermentation can take place, and therefore decay is reduced to a minimum and in most cases to an impossibility.

The second, and to me more important discovery which I made in those mouths was the appearance of the gum tissue. We all know how healthy gums ought to appear. It is, however, another thing to see gums shrunk away from teeth anywhere from

one-half millimeter at the gingival line of the teeth or within one millimeter of the apex of the root and still observe the same beautiful appearance of perfectly healthy normal gum tissue. One other thing it is to have cases presented where a large number of pyorrhea pockets have been healed and where others have been under treatment—also showing the same healthy and normal appearance.

The treatment of these cases goes decidedly beyond the mechanical. We know that pyorrhea alveolaris is a pericemental disease; the pericementum is a continuation of the connective tissues of the submucous layer of the gum and constant friction of the gum tissues must have a stimulating effect upon its capillary circulation which naturally is conveyed to the pericementum itself. The lymphatics of the pericementum must receive a stimulation which enables them to carry off any foreign matter which, owing to a sluggish circulation, has remained and exerted its destructive influence upon the periodontal membrane. Dr. Smith's treatment is primarily mechanical and becomes secondarily physiologic. Dr. Rhein who examined the same mouths with me called my attention to the gum tissues having more or less of a tumefied appearance. I consider this perfectly natural, and one of the reasons why the gums adhere to their parts with such tenacity. Owing to the great amount of friction or mas-

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sage, I know Dr. Smith objects to this term—the gum tissues are compelled to an exercise which causes development the same as the athlete develops his biceps.

Whether Dr. Smith can cure all cases of pyorrhea by local treatment I doubt.

An Interesting Case.

Among the many mysterious cases I have seen, one which presented itself to me about a year ago was most remarkable. A lady about thirty years of age consulted me about her teeth, which as she expressed it were “dropping out.” On examination I found that she had lost the 12th year molar on the right side and that the corresponding one on the left was ready for removal. I removed the tooth with thumb and index finger and dismissed the patient for another consultation. The patient was of a neurotic kind, emaciated and suffered from lack of assimilation of food. Rheumatism was a family heirloom, but the patient had no manifestation of it, excepting that the pyorrhea was such. On careful examination I found all of the upper teeth from the first bicuspidæ back more or less loose, this condition having been much less marked on the lower teeth. The gums showed little or no shrinkage, and their appearance was almost that of a perfectly normal kind. There was absolutely no pus discharge nor a perceptible serumenal deposit, and the mouth generally was prophylactically in better condition than most of the mouths that come under our observation. I decided at once that the physician was needed in this case together with such local treatment as I could possibly administer under the circumstances. A diet of milk and eggs, was substituted for the general mixed diet and tonics administered. Large quantities of water together with tartar lithine were taken, plenty of fresh air and such exercise as an anemic body could comfortably endure were recommended. The local treatment consisted in as vigorous a prophylaxis as I could apply, repeated once every week for some two and one-half months and at greater intervals after that. Of all medicaments trichloracetic acid and iodine stimulation are my standards, which were used in the case. Today the patient presents almost a perfectly normal condition; the gums which never showed much of a pathologic appearance are beautiful, the peridental membrane is performing its normal function because the teeth are perfectly firm.

Alcohol as a Mouth Wash.

In connection with this subject permit me to say that I never had much belief in mouth washes in the prophylactic treatment of the oral cavity. About two years ago I began the use of alcohol which I recommend my patients to use as strong as possible. A 25-45 per cent solution of it is about what a normal mouth can comfortably endure. After every meal

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a vigorous use of it by the cheek muscles is recommended for five minutes. Whether an illusion or not I have found it superior to the many other medicants used for the purpose. In two instances the patients informed me that they could now drink cold water and eat ice cream without pain, when roots were more or less exposed from pyorrhea. This, gentlemen, is quite significant. We know that alcohol is a great astringent owing to its power to coagulate albumen and abstract water from the tissues, and no doubt many mouth washes owe their action to alcohol only. I urgently request you gentlemen, to try its individual action in cases of pyorrhea and general prophylaxis of the mouth.

The question now arises regarding the case stated: Would the best Smith's prophylaxis have sufficed to treat that case, without the intelligent and additional systematic treatment and consequent systematic metamorphosis. I firmly believe that my local operations in this case were decidedly secondary. Does this, even if proven beyond a doubt detract from the value of the prophylaxis, Dr. Smith has taught the profession? Not at all. I personally believe that the majority of the pyorrhea cases can be cured by complete oral prophylaxis, but I more firmly believe that a greater majority of cases can be *averted* by complete oral prophylaxis.

A great deal of discussion has arisen among the profession as to whether Dr. D. D. Smith was the first one to really practice prophylaxis. I do not believe he was. I have no doubt that Adam and Eve knew enough to rinse their mouths after they ate the poisonous fruits. There is no question in my mind that every good and bad practitioner has kept his patients mouth clean according to his own individual view. But no one has ever impressed upon the profession in such powerful—sometimes too powerful a way, the meaning of prophylaxis, and above all no one until Dr. Smith has reduced prophylaxis to a system without which no first class man should keep a dental record. This systematic reminding of patients of the necessity of prophylaxis gives it a professional significance and importance without which it is impossible to perform any dental operation well.

Cleaning teeth by the dentist was one of those occasional necessities some patients would resort to before a ball or before a second marriage. Prophylaxis of the oral cavity has now been elevated to the most important factor in first class dental practices and it must of necessity assume, in time, the same rank in all practices. To what extent oral prophylaxis influences general health is a question not for me to discuss at this time. Some may go too far in their enthusiasm.

The statement that Dr. Smith made in regard to renal diseases is one that will not stand scientific scrutiny without proper statistics which, I question, can ever be brought forth to substantiate his statement.

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Every act of cleanliness is an improvement of the human system, though the degree remains relative. If oral prophylaxis will not do away with all pathogenic bacteria that lie dormant in the oral cavity, it has done enough for humanity if it minimizes tooth decay and pyorrhea alveolaris, the two most destructive factors we have to deal with, and Dr. Smith may certainly take the credit to himself for having helped prophylaxis to a standing to which it had never attained before.

President Sutphen. I have been requested to call upon Mr. Reed, a patient of Dr. Smith's who will now address us.

Mr. Reed. My position is that of a rank outsider and perhaps what I have to say will not be of particular value.

But I am here and have listened with a great deal of interest to what Dr. Smith has said, and to the discussion and all that I have to say is that from a peculiarly filthy condition of the mouth my present condition is one of almost absolute cleanliness, and I have been cured of certain of those conditions that I have heard discussed, due entirely to the operations of Dr. Smith.

Beyond that I cannot say anything. I believe that the doctor is going to extend an invitation to some of you, or all of you, to make an examination of my mouth tomorrow at the hotel, and I will be very glad to submit myself to such an examination.

Dr. Luckey. It gives me great pleasure to follow my valued friend Dr. Hofheinz. I had the pleasure of standing side by side and shoulder to shoulder with him on the night we graduated in New York many years ago. And I am glad to hear his voice tonight on this time-worn subject, which has worried the dental profession ever since I have been a member of it—and as far as I can see we have made but little progress in the matter during that time.

Its cure is based upon the accurate and thorough removal of all deposits, and the use of this, that and the other remedy. Dr. Hofheinz succeeds with the use of one or two remedies which he has named, Dr. Smith with others, I, probably, with others, and you with something else, but we all "get there" once in awhile; and only once in awhile. The gentleman who says in a dental meeting that he can and does cure pyorrhea and does it all the time, does not know what he is talking about—the cases he does *not* cure do not always come back to him, and he marks them as cured on his books.

If there is any man to whom, on the subject of dental prophylaxis I take off my hat it is Dr. Smith to whom we have listened to night. I think the last pamphlet he sent me was the clearest and cleanest exposition on this subject, and pyorrhea I have ever read. But like all other forceful men he goes to extremes, he loses himself, and goes beyond the realm of

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possibility and says things which in soberer moments he would not say; and he has said things tonight in which I think he oversteps the bounds of propriety. One of the things I remember that he said was that there is no human being who possesses a full natural denture but is the subject of torture. Those may not be the exact words but that is the idea conveyed.

Dr. D. D. Smith.

Oh, no!

Dr. Luckey.

Please restate that part of your address.

Dr. D. D. Smith.

I said that they were the subject of infection, I did not say torture.

Dr. Luckey.

Not infection, that was not the word you used—suffering, was it not?

Dr. D. D. Smith.

Yes, suffering.

Dr. Luckey.

Well, that is the same thing.

Dr. D. D. Smith.

Oh, no!

Dr. Luckey.

If suffering is not torture, then at least torture is suffering.

That statement is not absolutely correct. I have seen many dentures where there has been no suffering. I personally am the possessor of a perfect denture as far as I know, with all of the teeth in position, with no fillings and no cavities, and if I have ever suffered with my teeth some one else must tell me about it. I am not conscious of it in any way.

Then, too, Dr. Smith took the opportunity of—I do not like to use the word, but I think it expresses it—of “knocking” the Prophylactic toothbrush. He says it is no good, that it does not work. I have used it ever since it has been on the market; I recommended it and I believe today it is the best toothbrush made, and I have no stock in the Florence Company either! Nor did he tell us what was better.

Dr. Smith.

Because I hadn't time; I will if you give me the time.

Dr. Luckey.

I cannot allow a man to knock down one idol and not put up another; to take away my religion and not give me a better one in return; or take away my toothbrush and not give me a better one, but coming before an audience constituted as this is of old and young men in dentistry and of laymen and telling them the thing they have been using is no good without showing them something better; it is not right.

Another subject that Dr. Smith referred to was that these renal diseases which are the result of pyorrhea; that they to his knowledge (and he is an older man than I, I think), have never occurred in cases of edentulous mouths.

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Dr. Smith.

Originated.

Dr. Luckey.

Originated; we will put it that way. I had in my own family circle a sister-in-law and a brother-in-law; my brother-in-law was a magnificent specimen of manhood, an old army officer, six feet two inches tall, with shoulders like an Ajax, with a full double artificial denture, and he died at fifty-five years of age of renal trouble, contracted after his teeth were out as far as I know. His wife died four years later, and she had a double artificial denture which I made for her—twenty years previous to her death—and she died of Bright's disease of the kidneys.

Dr. Smith.

Does that meet the situation?

Dr. Luckey.

Perhaps, Dr. Smith, I have not interpreted your marks aright, but as I *do* interpret them I think that meets the situation—that renal troubles do not always originate with the natural teeth in the mouth.

Dr. Smith.

I did not make the statement that they did.

Dr. Luckey.

We might discuss this question from now till doomsday, but until you or some other man can give the reason for pyorrhea on one side of the mouth, and perfect teeth free from disease on the other, we do not understand the subject. You may have pyorrhea in the first bicuspid while the second bicuspid adjoining will be absolutely perfect. Why? Who can tell the reason? I don't know the man who can.

We speak of our cases, I have my successes and unfortunately, but naturally, I have my failures. To recite only one case, the wife of a Cabinet Officer, who had been a patient of mine for some years, was living in Washington and was sent by her husband to a well known Washington dentist. Her mouth was in good condition when she left me, but I had not seen her for two years and she telephoned me one morning from Washington that she was coming to Paterson the next day to see me. She came and the six lower anterior teeth were as loose as any teeth I have ever seen; the gums were inflamed. I was astounded and asked her how it happened; she said she did not know, only that her husband had insisted that she should see this celebrated dentist in Washington; and that was the result. She asked me if I could do anything; I did not know, but said I would do the best I could. She remained in Paterson for a week returned to Washington for two weeks and came back again. I did not go into any high flying notions about how to do this, that or the other thing, but I proceeded, as almost any other gentleman in this room would, to remove *all* of the accretions, to sterilize the sockets, to apply stimulating antiseptic washes, with the result that that lady's gums are healthy today and her teeth firm. That is one of my successes; I have done the same

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thing with others and made failures. When you can tell me why, you and I will understand the subject, but until then it is all talk. We can go through certain processes, but there are to my mind certain constitutional conditions, certain conditions of the body, of the fluids of the body, which at one time will prevent success with a given treatment, and at another time permit it. You may treat two people exactly alike with apparently the same conditions, and get two different results. *Do you know why?* When you do, you can stand up in this or any other dental meeting and receive the plaudits of all in attendance, because they can then go home, and save their patients' teeth; but until you do that, they will be no wiser than they are tonight.

I think the best thing I ever met on this subject, and the most practical, was at a meeting of the National Dental Association in Saratoga some eight or ten years ago. This very subject was being discussed, very learnedly, as it has been tonight. Dr. Darby, of Philadelphia, and many other Professors, from the Pacific to the Atlantic, some who were not Professors, discussed it from the constitutional standpoint, and the local standpoint, and each man sat down completely satisfied with his own presentation of the subject. Just before the question was passed, an old gentleman, hoary with age, from somewhere I think out in Ohio or Indiana, got up tremblingly and asked for the privilege of the floor. He said: "I am not a member of this society, but I have practiced dentistry for sixty years, and I ought to know something about it; I have seen py—is that what you call it? Oh, yes, pyorrhea, that is the name; we used to call it tartar on the teeth; I have seen this disease many times, and I have an infallible cure, which I have never seen fail; if you gentlemen practice it as I have you will all have success." Everybody was listening with eager ears to hear what the old man would next say, and he proceeded, "Whenever they come to me with their teeth shaking around, and this tartar all about the roots, I just turn to my cabinet, take out a pair of forceps and the pyorrhea is cured."

I have listened to Dr. Smith's paper with a good deal of interest, and it seemed to me he was telling us of chronic cases which had long past their condition where we could have hoped to make them as useful as they might have been, and I could not help thinking as I looked on those cases what long and weary hours must have been spent in trying to bring them back to health, and then with only partial success.

Whose fault is it that we have so many of these cases coming to us in such an advanced stage; are we free from sin in this matter? Gentlemen, we do not recognize those cases until they have gone into the advanced stages. If we would follow Dr. Smith's teachings and deal

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with every case in its incipency we would not have so many people coming to us with their teeth shaking and gone away past our ability to make them as useful as we would like to. It is our own fault, we are not teach our patients the importance of caring for these little irritations while they are young. How often we hear it said, "We rarely see this disease in the mouth until the patient is forty years of age." In civilized life I will venture to say that more than three-fourths of the people have the incipency of that disease away back down into the early teens. I have seen cases fourteen years of age that have been neglected until the teeth were almost coming out. Talk about its not appearing until they were forty years of age, it is there in the children, and it is our business to be faithful to them, it is our business to prevent this advanced condition of pyorrhea, it is our business to be of service to the patient, and to prevent very nearly all decay. I was talking to a man yesterday and he said, "You can't take care of children's teeth so that you will prevent decay." I said, "If you will keep those teeth absolutely clean you will not see a particle of decay, unless it be at a point it is impossible to reach." Those conditions go on producing the evil effects elsewhere, and leading into uremic trouble, and men tell us that in order to cure pyorrhea we must give it systemic treatment. I will defy you to give us a single instance of pyorrhea which has ever been cured by systemic medication, without any surgical treatment. Such a case does not exist and will not exist. If you scrape out all the tartar, remove all foreign substances and then begin to treat it with medicine—why, you have cured it, if you have got out all of that trouble, without the medicine.

Not long ago I had a lady patient who had been persuaded for two years to come to me monthly for treatment; her teeth were considerably loose, and she was wearing a gold plate, which cut badly, when she first came, and she was not feeling at all well, and I told her that if she would come under my care, she would doubtless feel better in every way. She did not believe it, but reluctantly consented to come to my office monthly. The other day I said to her, "Madam, your eyes look a good deal brighter, your complexion is better and, it seems to me, you must be feeling better." She looked at me, smiled and said, "Doctor, I am feeling a great deal better, and what is more, my rheumatism is all gone. I have been treated for eight years for it and it seems very funny that it should now be cured through the mouth. Why is it?"

Now if the stomach and kidneys are so especially sensitive to the effect of bacterial poisoning in the mouth, why should we allow that to remain there? It can be cured if taken in time, but if the parts have become so affected as to be practically diseased it is a much more difficult proposition.

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I have a great love for this subject because I have had it called to my attention from early life, and by our friend Dr. Smith. Is there a man or a woman in this audience who intends to be so obstinate that he or she will not rouse up and begin to do better for their patients? Are we so dull to all that is brought to our knowledge which is true and progressive as to stand back and remain in the old ruts, making a cap to stick on a tooth and leaving it to breed bacteria until the patient is laid on the altar of general prostration? Is that the best practice, because you can get \$10 for a cap and get it quickly? The chances are your patient goes somewhere else, and you will presently see that your patients are dwindling away. If we treat our patients fairly we will one day be in the position that the essayist is, of dismissing patients day in and day out for want of time to see them; people abundantly able to pay for treatment, too. Many a man is wondering why he is not busy; it is simply because he is not doing justice to his patients. He has put on the easily applied cap or a cheap filling and the patient has soon found he is not getting the worth of his money, and that has been the end of him.

I take the floor more to corroborate Dr. Smith's
Dr. Register. stand in regard to the causation of pyorrhea than anything else, and as I am to have the honor of reading a paper before this society tomorrow, which includes a good deal upon this subject, I do not care to use my powder up tonight.

But there are two or three phases of this subject which have not been touched on at all. Dr. Luckey referred to the old gentleman who always resorted to the forceps and immediately cured the pyorrhea; in that statement he covered the whole ground of the anatomical side of pyorrhea.

One thing that Dr. Smith did not dwell upon is the cementum, and from a careful observation clinically I am forcibly impressed that there is the vulnerable point of the disease. It commences there.

One speaker said that he met people with this disease at the age of fourteen years; I am meeting patients of fourteen all the time, and who is not meeting them, affected by a simple gingivitis—it commences as such, and, as Dr. Smith said, when you clean the teeth the gums stand away from the teeth; that constitutes the gingival space and it is in that space where the trouble commences; it begins with the graduation of matter, debris laden with bacteria, and it was not until the electric light was introduced in operative work in the mouth that this condition presented itself to you and to me and to every one who chooses to familiarize himself with the subject.

I have given this matter considerable attention and, undoubtedly, oral prophylaxis offers to us, as a profession, means of not only serving the people but of preventing a very dangerous environment from affecting the system at large.

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I move that the further discussion of this subject be postponed until ten o'clock tomorrow morning, and that it then be taken up by Dr. Gordon White and Dr. D. D. Smith.

The above motion was seconded.

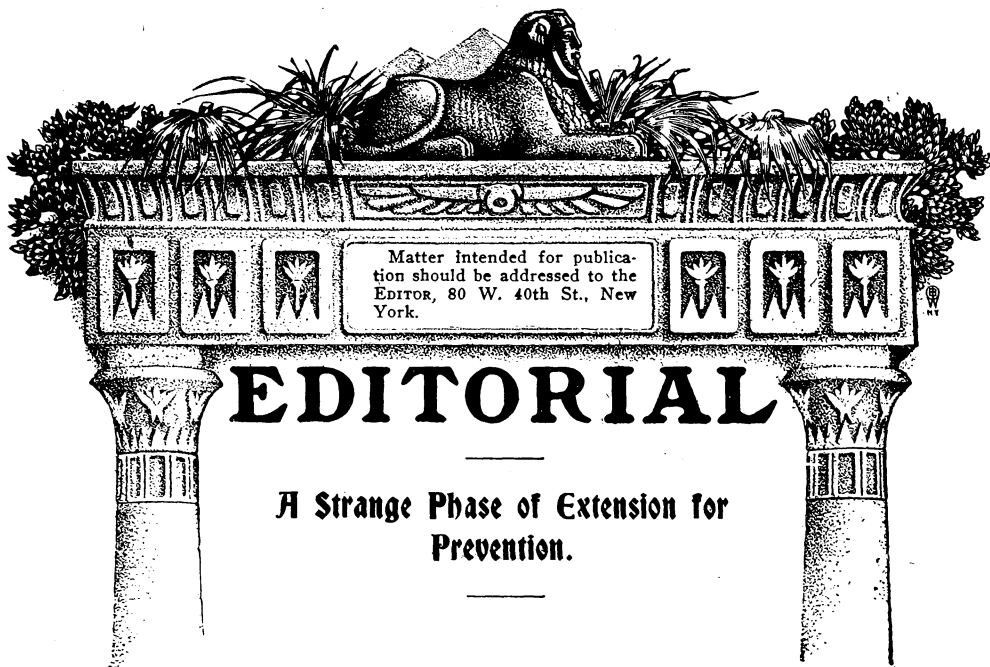
Dr. Smith. I spoke up at Albany when our friend here, who has been denouncing me so outrageously, was president of the Society, and he had the impudence to introduce me to the audience at just about this hour. I know you have got on hand all you can do tomorrow, and so have I, and it is a question in my mind whether you had not better either drop this subject or finish it up tonight. It would seem to me tonight is the time because you will not take it up with the same interest tomorrow morning. It is, however, with you to decide, but I wish to say to you that the gentleman who spoke to you a few moments ago, a patient of my own, who has been under the prophylaxis treatment for a little over a year and whose mouth exhibited almost every variety of pathological conditions and now shows them restored, will be at my hotel tomorrow morning where any of you can examine the condition of his mouth. In addition to which, I have several specimens of pericemental disease which I shall be glad to exhibit to you, together with the instruments which I use.

As Dr. Flagg said on one occasion, gentlemen, this is the last time, in all probability, that I shall be with you. I am getting to be an old man; it is not at all unlikely this will be the last time I shall be here and I shall be glad to have you make the most of it.

One other thing; it has been intimated by gentlemen here that I have not touched upon certain phases. I admit it, I admit my inability to touch, in the length of time we have had to consider this most important subject, upon those matters. Dr. Luckey has said some things I want to reply to. He is right and yet he is wrong, and he has presented it in a certain light from which you will carry away a wrong impression, unless that is dispelled, and so there are reasons why I want you to examine this case I spoke of, and why I wish to speak. Dr. Luckey has said one thing which is perfectly legitimate as a criticism, and that is, I did not exhibit a tooth brush to take the place of the one I condemned. I brought two here on purpose to exhibit them, and now I cannot find them.

(The motion of Dr. Luckey was amended so as to confine the time for discussion tomorrow morning to one hour and was then adopted.)

On motion, adjourned.



The First District Dental Society has crowned itself with glory. At its December meeting Drs. Black and Wedelstaedt expounded the doctrine of extension for prevention.

The reception given to Dr. Black, when he was introduced by the president, to an audience of nearly five hundred dentists, was nothing short of an ovation; indeed, the applause continued until Dr. Black raised his hand for silence.

He then proceeded to give a presentation of his subject which proved to be one of the very best of his many fine papers. After the paper proper, he delivered a most instructive lecture, mainly dealing with the initiation of caries in the teeth. He presented in evidence more than two hundred lantern slides, the majority of these being superb photographs of human teeth, whole and in sections showing the inroads of caries. These were followed by wash drawings illustrating the method of cavity preparation, and the true limitations of extension for prevention. These limitations proved to be a welcome surprise to the men of the East, who learned for the first time that the extension should be neither so broad nor so deep as some Dr. Black's disciples had led them to believe. Many discovered that they had been for years practicing very close to the lines laid down.

EDITORIAL

In order to bring out the point which is the motif of this editorial, the *raison* of extension for prevention must be briefly reviewed.

What is Extension for Prevention. Dr. Black claims, and fairly demonstrated with his wonderful illustrations, that caries starts invariably at certain definite points. As a logical sequence

he deduces that on all teeth there are certain *most vulnerable* spots and certain *least vulnerable* areas. In any scientific endeavor to save teeth by filling, it therefore becomes needful to entirely eradicate not only the actually decayed portion, but all of the *most vulnerable* part, the cavity being extended toward the *least vulnerable* areas. These latter are the regions of comparative immunity. He finds the four angles of the human tooth to be peculiarly immune; these be the two



Fig. 1.

labial approximal angles and the two lingual approximal angles. He also considers that the nearer the gingival margin of a cavity is made to reach, or lie under, the gum margin, the greater the immunity. Extension for prevention, then, is such extension of cavity margins, as will lay these margins in comparatively immune zones.

Cavity Preparation. There is, however, another aspect of cavity shaping, of practically equal importance. This has to do with the proper-making of the filling so that it will not only be retained, but that likewise it will continuously seal the cavity, and protect all margins. In the bicuspid and molars, a very definite cavity formation is the dogma. (Fig. 1.) The gingival margin is laid at or beneath the free margin of the gum; the side walls rise erect from a flat gingival seat; there is a step in the axial wall, and the occlusal walls again rise at practically right angles. It is to be noted that this is a wide

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open cavity. The reason for this extreme opening is frankly stated. The cavity must be so formed that it can be properly, accurately, and "conveniently" filled. This axiom was repeated so often that there can be no misunderstanding about it. The cavity must be so shaped that it can be conveniently as well as accurately filled.

On the second evening of this great meeting Dr. **The Gingival Margin.** Wedelstaedt explained the technique of filling this wide open cavity. We must either cover the gingival seat first with one fold of non-cohesive foil (the Black method), or else

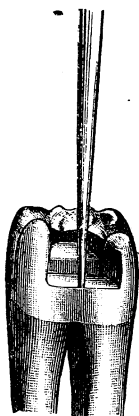


Fig. 2.

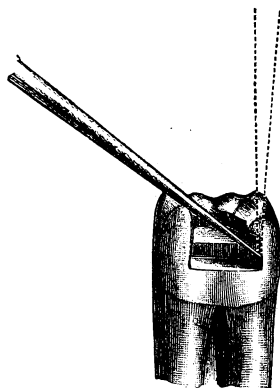


Fig. 3.

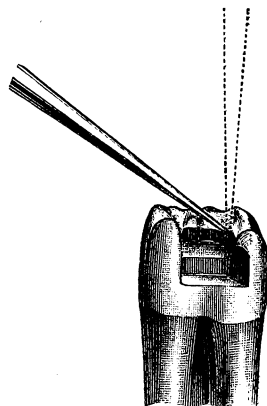


Fig. 4.

we might cover it with three cylinders of non-cohesive foil. The rest of the cavity could well enough be filled with cohesive foil. Why should this be? Let us analyze the proposition.

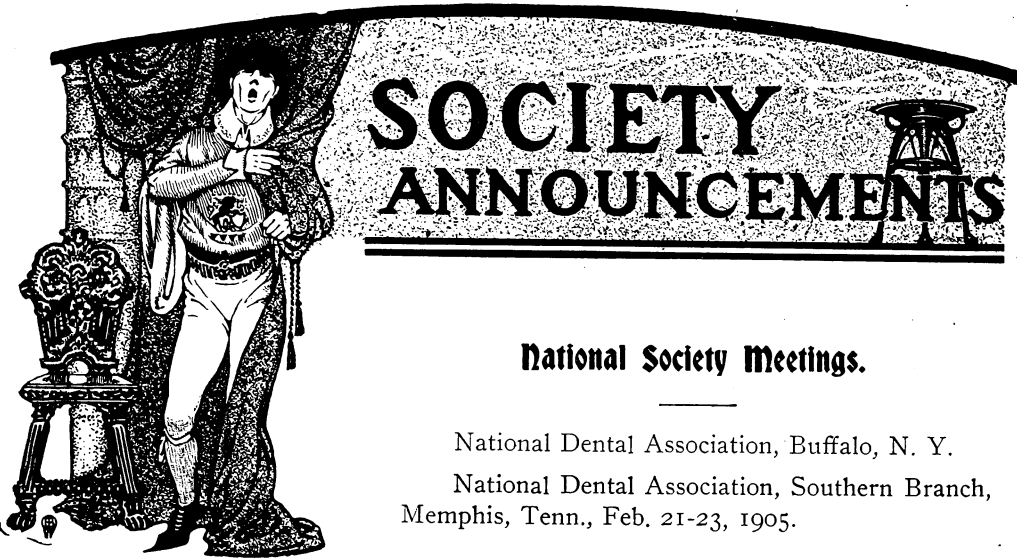
Let us divide the margins of this cavity; there is the gingival margin, the labial margin, the lingual margin, and the occlusal margins; Let us say four margins, or parts thereof. We are told that the occlusal margin, which endures the greater share of masticatory stress, may be thoroughly well protected with cohesive gold. It is admitted that the labial and the lingual margins can be made equally safe with cohesive gold, always provided that the extension has brought them to the area of greatest immunity. But at the gingival margin cohesive gold must be eschewed. Now why? Have we not extended this margin to an immune area also? Have we not made the seat flat? Cannot we mallet



our gold more accurately, more densely, more tightly, against this flat seat than elsewhere? Remember that we were instructed to shape this cavity that we may be able to fill it not only *accurately*, but also *conveniently*. And yet when Dr. Hofheinz was asked, why, if he could protect all the other margins with cohesive gold, he should prefer non-cohesive for the gingival margin, his reply was "Because it is the most inaccessible." But have we not shaped the cavity so that it can be filled *conveniently*? Is not this very gingival margin the only one against which gold may be packed holding the instrument in the line of the long axis of the tooth? (Fig. 2.)

To those who have always used cohesive gold, it is exactly this much-discussed gingival margin about which there is the least anxiety, and it is for this very reason. These men believe that at least they can securely pack gold against the gingival seat and gingival margin because it can be packed in the direction of the long axis of the tooth. Coming to the side walls (Fig. 3), if the plugger is held similarly, that is to say, at right angles to the margin, it would be directing a blow across the tooth which would be inadequate and unendurable. If held in the direction of the long axis of the tooth, the side of the plugger would rest against the margin (dotted line in illustration) for which reason the instrument is usually slanted to some extent, so as to make impact against the margin. (Fig. 3.) Exactly the same condition presents when packing against the occlusal margins. (Fig. 4.) Thus we find, as claimed above, that the gingival seat and gingival margin offers the most favorable conditions for the proper packing of cohesive gold. If then this form of cavity preparation brings all the margins into the safest areas, and if it is a convenient form, and if cohesive gold will preserve three-quarters of the margins, it must follow, and what is more, it does follow, that cohesive gold will save all the margins.

If, however, cohesive gold will not preserve the gingival margin shaped and placed as directed, then it is a logical deduction that the area which we are told is immune, is really not immune; in which case, extension in this direction is ill advised. The advocacy of non-cohesive for the gingival margin seems therefore to be a strange phase of the extension for prevention theory.



National Society Meetings.

National Dental Association, Buffalo, N. Y.

National Dental Association, Southern Branch,
Memphis, Tenn., Feb. 21-23, 1905.

State Society Meetings.

Connecticut State Dental Association, New Haven, April 18-19.

Delaware State Dental Society, February 1.

Florida State Dental Society, La Breeze Beach, May 31.

Illinois State Dental Society, Moline, May 9, 10, 11.

Indiana State Dental Association, Detroit, Mich.

Iowa State Dental Society, Des Moines, May 2, 3, 4.

Kentucky Dental Association, Lexington, May 15, 16.

Maine Dental Society, Portland, July 18, 19, 20.

Massachusetts Dental Society, Boston, June 7, 8.

Montana State Dental Society, Butte, February 20, 21, 22.

New Jersey State Dental Society, Asbury Park, July 19, 20, 21.

New York State Dental Society, Albany, May 12, 13.

Pennsylvania State Dental Society, Philadelphia, June 27, 28, 29.

South Dakota State Dental Society, Mitchell, June.

Tennessee Dental Association, February 21-23.

Vermont State Dental Society, Rutland, March 15, 17.

Wisconsin State Dental Society, Oshkosh, July, 1905.



The Xi Psi Phi (Beta Chapter) Alumni.

The Xi Psi Phi (Beta Chapter) have organized an alumni and will hold a dinner in New York City during the latter part of February. For further information, address,

85 Main street, Flusing, N. Y.

HORACE W. KING, D.D.S.

Eastern Dental Society of the City of New York.

On Thursday, December 1, 1904, the Eastern Dental Society of the City of New York held its thirtieth regular monthly meeting (fifth annual) and closed the year's activity by listening to reports of its standing committees. Being election night all scientific discussions were laid over for the next meeting. The following officers were elected for the ensuing year: Dr. D. N. Booth, president; Dr. H. M. Zeitlin, vice-president; Dr. Joseph Sookne, secretary; Dr. Elias Gluskin, treasurer. On Thursday, December 15, 1904, the society held a special meeting at which Dr. William Carr, chairman of the Law Committee of the State Dental Society, and William D. Purrington, Counsellor of the State Dental Society, addressed the members on "How to Rid Ourselves of Illegal Practitioners." For two and a half hours both speakers ably and eloquently presented the question from a moral and legal side. The statement of Dr. Carr that he always was and is ready to sacrifice all energy and time necessary for uplifting the dental profession to its high station was warmly greeted by the numerous attentive listeners and his promise to visit the society at any time called upon was met with same results. At the conclusion the Eastern Dental Society extended a hearty vote of thanks to the most prominent defenders of legal dentistry, expressing their hopes that the time is near when the harm spread by the dental quacks to the population of this great city will be done away with forever. The next meeting will be held Thursday, January 5, at Clinton Hall.

202 E. Broadway, New York.

JOSEPH SOOKNE, Secy.

Woman's Dental Association.

The Woman's Dental Association has been holding regular monthly meetings which have been well attended. Clinics on porcelain work, orthodontia and reading papers have been the principal interests. The next monthly meeting will be held at 228 South 16th street, Philadelphia, on Saturday, January 7, at 2 p. m. Dr. Belle Whitcomb will clinic and read a paper.

ELI A YERKES, Secy.



Ohio State Dental Society.

At the thirty-ninth annual meeting of the Ohio State Dental Society held in Columbus, December 6, 7 and 8, the following officers were elected: President, S. D. Ruggles, Portsmouth; first vice-president, H. L. Ambler, Cleveland; second vice-president, H. C. Brown, Columbus; secretary, F. R. Chapman, Columbus; treasurer, C. I. Keely, Hamilton. 305 Schultz Bldg., Columbus, Ohio. F. R. CHAPMAN, Secy.

Wisconsin State Board of Dental Examiners.

The next meeting of the Wisconsin State Board of Dental Examiners for examination of candidates desiring license to practice dentistry in Wisconsin, will be held in Milwaukee, January 30, 1905.

Application must be made to the secretary fifteen days before examination. The candidate must be a graduate of a reputable dental college, or have been engaged in reputable practice of dentistry consecutively for four years, or an apprentice to a dentist engaged in the reputable practice of dentistry for five years.

For further particulars apply to,
1218 Wells Bldg., Milwaukee, Wis.

J. J. WRIGHT, Secy.

Pennsylvania Association of Dental Surgeons.

The fifty-eighth annual meeting of the Pennsylvania Association of Dental Surgeons was held at the Continental Hotel, Philadelphia, October 11, 1904. The following officers were elected for the ensuing year: President, Dr. M. I. Schamberg; vice-president, Dr. Albert N. Gaylord; secretary, Dr. J. Clarence Salvas; treasurer and librarian, Dr. Wm. H. Trueman.

Montana State Dental Society.

The second annual meeting of the Montana State Dental Society will be held in Butte, Montana, February 20, 21 and 22, 1905. Arrangements are being made for the coming meeting to be one of the very best ever held in the northwest. Two men from the East will be present to give clinics in both porcelain inlays and gold fillings. Address all communications and applications for membership to

Great Falls, Montana.

DR. GEO. E. LONGEWAY, Secy.



Arizona Board of Dental Examiners.

The Board of Dental Examiners of Arizona will meet in Phoenix, Feb. 23, 25, for the examination of candidates desiring a license to practice dentistry in Arizona. Applications must be filed before February 18, and all applicants must come prepared with instruments. The fee is \$25.
Fleming Block, Phoenix, Ariz. W. G. LENTZ.

Joint Meeting of the Southern Branch of National Dental Association and Tennessee Dental Association.

The eighth annual meeting of the Southern Branch of the National Dental Association will meet jointly with the Tennessee Dental Association at Memphis, Tenn., February 21-23. Special R. R. rates, one and a third certificate plan.

Asheville, N. C.

J. A. GORMAN, Secy.

Delaware State Dental Society.

The Delaware State Dental Society will hold its next meeting on Wednesday, February 1, 1905.

Wilmington, Del.

R. H. JONES, Secy.

South Dakota State Dental Society.

The twenty-second annual meeting of the South Dakota State Dental Society was called to order on the morning of June 7th, in the Brown County courthouse in Aberdeen, South Dakota. President C. E. Stutenroth appointed the following special committees:

Membership, auditing and resolutions.

Minutes of the last meeting held read, corrected and approved.

The regular order of business was suspended, and President Stutenroth introduced Dr. E. K. Wedelstaedt, of St. Paul, who gave a talk and essay, illustrated by models and materials, demonstrating his method of packing gold.

Discussion was opened by Dr. D. St. I. Davis and Dr. Collins, and became general.

Dr. W. D. James, of Tracey, Minn., was then introduced and occupied the afternoon with an essay on the anatomical occlusion of artificial teeth,

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followed by the exhibition of a number of models taken from practical cases in his practice.

June 8, 1904.

Dr. E. K. Wedelstaedt opened the morning session with a clinic, filling with gold a mesio-occlusal cavity in a left upper molar.

At 1:40 p. m. meeting was called to order for transaction of business. Membership increased by eight members.

At 2 p. m. Dr. Wedelstaedt again took the platform and demonstrated several different methods of packing gold, using a large plaster model tooth, and filling tooth with clay, also, filling a simple occlusal cavity, using soft and cohesive gold, separately and in combination. He followed with a talk on the lack of unity in our efforts, and extended to our members an invitation to attend the meeting at the Black Club of St. Paul, Minn.

At 2:45 Dr. Field gave a clinic, filling with gold a proximal cavity in a premolar.

Dr. W. G. Collins demonstrated a method of making a perfect metal die without the use of cores or sand.

Dr. Lamme then gave a table clinic on gold inlaying.

Dr. Carl Fossum soldered a gold filling in a porcelain face crown, making but one investment.

Dr. W. H. Jackson filled with amalgam a mesio-occlusal cavity in a left upper bicuspid.

Meeting called to order at 8 p. m. for business.

Following officers were elected for the ensuing year:

Dr. C. E. Stutenroth and Dr. F. N. Palmer to succeed himself were nominated for membership on State Examining Board.

President, Dr. Lamme.

Vice-president, Dr. Robertson.

Secretary, Dr. A. W. Fossum, Aberdeen, S. D.

Treasurer, Dr. L. F. Straight.

Place of meeting, Mitchell, S. D.

Executive Committee, Drs. O'Neil and McCartney were elected members.

Adjournment to meet in June, 1905, at Mitchell, S. D.

J. W. Ross, Secy.